

U.S. Coast Guard Oceanographic Report

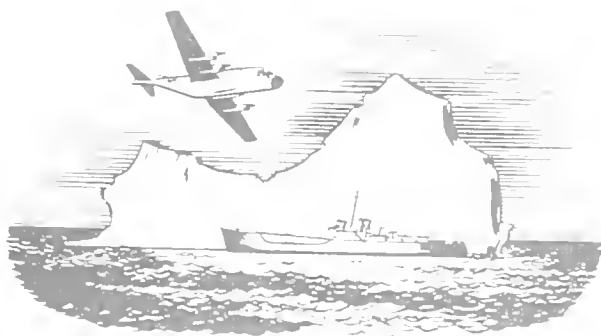
UNITED STATES COAST GUARD
OCEANOGRAPHIC
REPORT No. 41

CG 373-41

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THE LABRADOR CURRENT BETWEEN
HAMILTON INLET AND THE STRAIT OF BELLE ISLE

July 1968

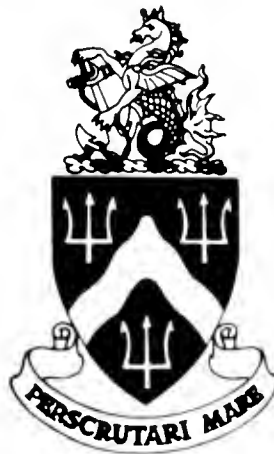


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REPORT No. 41 CG 373-41

THE LABRADOR CURRENT BETWEEN HAMILTON INLET AND THE STRAIT OF BELLE ISLE

July 1968

By Henry S. Andersen



WASHINGTON, D.C.





Frontispiece: USCGC EVERGREEN (WAGO 295)

ABSTRACT

In July and August 1968, the Coast Guard Oceanographic Unit conducted a cruise aboard the USCGC EVERGREEN to monitor the movements and deterioration of an iceberg and associated meteorological and oceanographic conditions. Only the results of the oceanographic observations are presented. Four oceanographic sections were occupied across the Labrador Current between Hamilton Inlet and the Strait of Belle Isle. Analysis of the surface dynamic topography and selected isopycnal surfaces indicates strong topographic control of the currents in this area. The temperature distribution along the southernmost section suggests that the coldest component of the shelf band of the Labrador Current passed landward of the area under study, reinforcing previously published information that the shelf band of the Labrador Current bifurcates east of Hamilton Inlet.

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The Labrador Current Between Hamilton Inlet and the Strait of Belle Isle

July 1968

Henry S. Andersen¹

INTRODUCTION

From 17 July to 16 August 1968, the Coast Guard Oceanographic Unit conducted a cruise aboard the USCGC EVERGREEN (WAGO 295) to collect information about iceberg drift and deterioration. This cruise was part of a continuing Coast Guard program to monitor the movements and deterioration of icebergs and associated meteorological and oceanographic conditions. The results of the oceanographic observations are presented here; iceberg drift and deterioration will be the subject of a future publication.

The USCGC EVERGREEN sailed from Boston, Massachusetts on 17 July 1968 en route to the area of operation in the western Labrador Sea between Hamilton Inlet and the Strait of Belle Isle (fig. 1). A medium-size drydock iceberg was located on 22 July and tracked until 9 August 1968. The trajectory of the iceberg was determined by using moored reference markers and periodic radar plotting. Concurrent with the tracking of the iceberg, direct current measurements were obtained by parachute drogues. A four-section hydrographic survey consisting of 48 Nansen stations was conducted during 22–26 July to determine the dynamic topography of the area. The USCGC EVERGREEN returned to Boston on 16 August.

Mr. Thomas C. Wolford, Oceanographer, served as Field Party Chief for this cruise. He was assisted by Lieutenant Commander Martin J. Moynihan, USCG, and Ensign Henry S. Andersen, USCGR. Technical assistance was provided by Danny L. Allen, Aerographer's Mate

Third Class; Michael L. Combs, Aerographer's Mate Third Class; Kenneth L. Mitchell, Sonarman Third Class; and Mr. Ronald B. Lorenz, student trainee.

DATA COLLECTION AND PROCESSING

Temperature data was acquired with paired reversing thermometers mounted on Teflon-lined Nansen bottles. Salinities were determined on board with an inductive salinometer, using tables prepared by UNESCO/NIO (UNESCO, 1966) for computing salinity from the measured conductivity ratios. Depths of sampling were determined from the wire angle of the cast and pairs of unprotected and protected thermometers on selected Nansen bottles. Dynamic heights were computed on board using a PDP-8/S computer. Dynamic heights in water shallower than the reference level were computed in a manner described by Kollmeyer (1967).

The data presented in the Tables of Oceanographic Data are reproduced from a computer listing from the National Oceanographic Data Center (Cruise No. 31-1260). Anomalies of dynamic height in the listing were computed by NODC, but all discussion of dynamic heights in the text and related computations in this report were based on dynamic heights computed on board USCGC EVERGREEN or by the Coast Guard Oceanographic Unit.

INTERPRETATION OF RESULTS

The Labrador Current comprises two distinct bands—one over the continental shelf and the other over the steepest part of the continental slope (Smith, et al., 1937). Near Hamilton Inlet, the inshore band over the continental shelf possesses colder ($<1^{\circ}\text{C}$), fresher ($<33.5\%$) wa-

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ter, while the offshore band over the slope possesses warmer ($>1^{\circ}\text{C}$), more saline ($>34.0\%$) water, greater velocities, and a greater thickness.

A chart of sea surface dynamic topography relative to 600 decibars was prepared for the survey area to estimate the component of motion of the study iceberg resulting from ocean currents. Defant's method of estimating the level of no motion by comparing the differences in dynamic height between pairs of stations at varying pressures (Defant, 1961) was applied to several of the deeper stations in the area surveyed, and 600 decibars was chosen as a reference level. The 600 decibar level also was a suitable compromise between the deeper levels previously used and shallower levels desired to reduce errors in the integration procedure in shallow waters. Defant (1961), on a chart of the entire Atlantic Ocean, presented a depth exceeding 1900 meters as a suitable reference level for the survey area. Previous work done by the Oceanographic Unit in the region utilized a reference level of 1500 decibars.

In the area surveyed, the slope band of the Labrador Current appears on the chart of dynamic topography (fig. 2) as a concentration of contours near the eastern ends of the occupied sections. The shelf band is exhibited most clearly by the presence of negative-temperature water centered at about 75 meters (figs. 11, 13, 15, and 17) and appears to be split into several bands.

The trajectory of the iceberg under study was generally consistent with the dynamic topography of the sea surface relative to 600 decibars (fig. 2) until 4 August when it began moving westward against the geopotential gradient of an anticyclonic gyre. On 6 August the iceberg began moving northwestward against the circulation of the gyre. This seemingly anomalous motion probably is the result of a change in the wind observed at this time. The wind shifted from about 320° at approximately 7 knots to 170° at approximately 15 knots and continued to blow at this velocity for the next 28 hours. The final part of the trajectory up to 1900Z 9 August is difficult to explain in terms of the observed winds or dynamic topography. The relationship between this portion of the iceberg's trajectory and the dynamic topography should be inferred with caution because this

portion of the trajectory occurred midway between two lines of stations (sections B and C) and two weeks after the completion of the oceanographic survey.

Because of the complexity of the surface dynamic topography and the uncertainty of the dynamic method in regions shallower than the reference level, an investigation of the region by isentropic analyses was conducted (figs. 3-10). It was recognized that in a comparatively shallow region such as the study area, where vertical mixing probably is extensive, isentropic analysis is not an entirely suitable tool of investigation either, but the analysis was performed to see if it would corroborate the results attained by the dynamic method.

Comparison of the variation of depth of the 27.00 σ_t and 27.25 σ_t surfaces (figs. 8 and 10) with the sea surface dynamic topography relative to 600 decibars (fig. 2) indicates agreement in the basic features of the current regime. Although this agreement might be expected because the distribution of sea surface dynamic heights and the configuration of density surfaces are both functions of the mass distribution, it is still encouraging that such agreement was found in view of the approximations used to integrate the dynamic height along the shoaling sea bottom.

The chart of dynamic topography (fig. 2) indicates a weak cyclonic gyre centered on the third station (station 10349) from the western end of section C. That this gyre plays a more important role in the circulation of the area than is apparent from its manifestation at the sea surface may be appreciated after examining the distribution of density along section C (fig. 21). A doming of the density surfaces, with its axis inclined to the west, arises out of a bathymetric depression centered on station 10350. The dome is associated with a cyclonic vortex whose speed of rotation below the pycnocline (located at about 20 meters) decreases with depth.

The vortex appears to be a direct consequence of a depression in the shelf at $53^{\circ}\text{N } 53.5^{\circ}\text{W}$ (fig. 1), near stations 10348-51 (figs. 15, 16, and 21). The bathymetric chart suggests that the sill depth is greater to the east of this depression north of section C. Vertical sections of temperature, salinity, and density through the bathymetric depression (figs. 15, 16, and 21) revealed an incursion into the depression

of slope water that is warmer, more saline, and denser than the adjacent shelf water. From comparison with sections B and D, it may be inferred that the lens of warm, salty water in the depression is the result of an influx of slope water between sections B and C.

Further evidence of the effect of the bathymetry upon the circulation in this area is afforded by the zigzag near 53°N 52°W of the slope component of the Labrador Current (figs. 2 and 10). This feature coincides with a northward projecting spur in the bottom topography (fig. 1). The 27.25 σ_t surface, which is 200 to 300 meters shallower than the bottom, possesses relief that is the approximate inverse of the bottom topography. As would be expected, the successively

shallower σ_t surfaces (figs. 4, 6, and 8) exhibit a decreasing correlation with the bottom topography.

The coldest water observed (−1.62°) occurred at stations 10370 and 10371 at the western end of section D (fig. 17). The absence of such extreme temperatures at the other more northern sections suggests that the source of this cold water was a filament of the Labrador Current inshore of the sections occupied by USCGC EVERGREEN. Bullard, et al. (1961), mention a division of the Labrador Current by the shoal off Hamilton Inlet. The bottom topography (fig. 1) includes a rise (<100 fathoms) near 54° 45'N, 55° 15'W which may be responsible for this division.

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- Bullard, R. P., R. P. Dinsmore, A. P. Franceschetti, P. A. Morrill, and F. M. Soule (1961) Report of the International Ice Observation and Ice Patrol Service in the North Atlantic Ocean—Season of 1960, U.S. Treasury Department—Coast Guard Bulletin No. 46, 114 pp.
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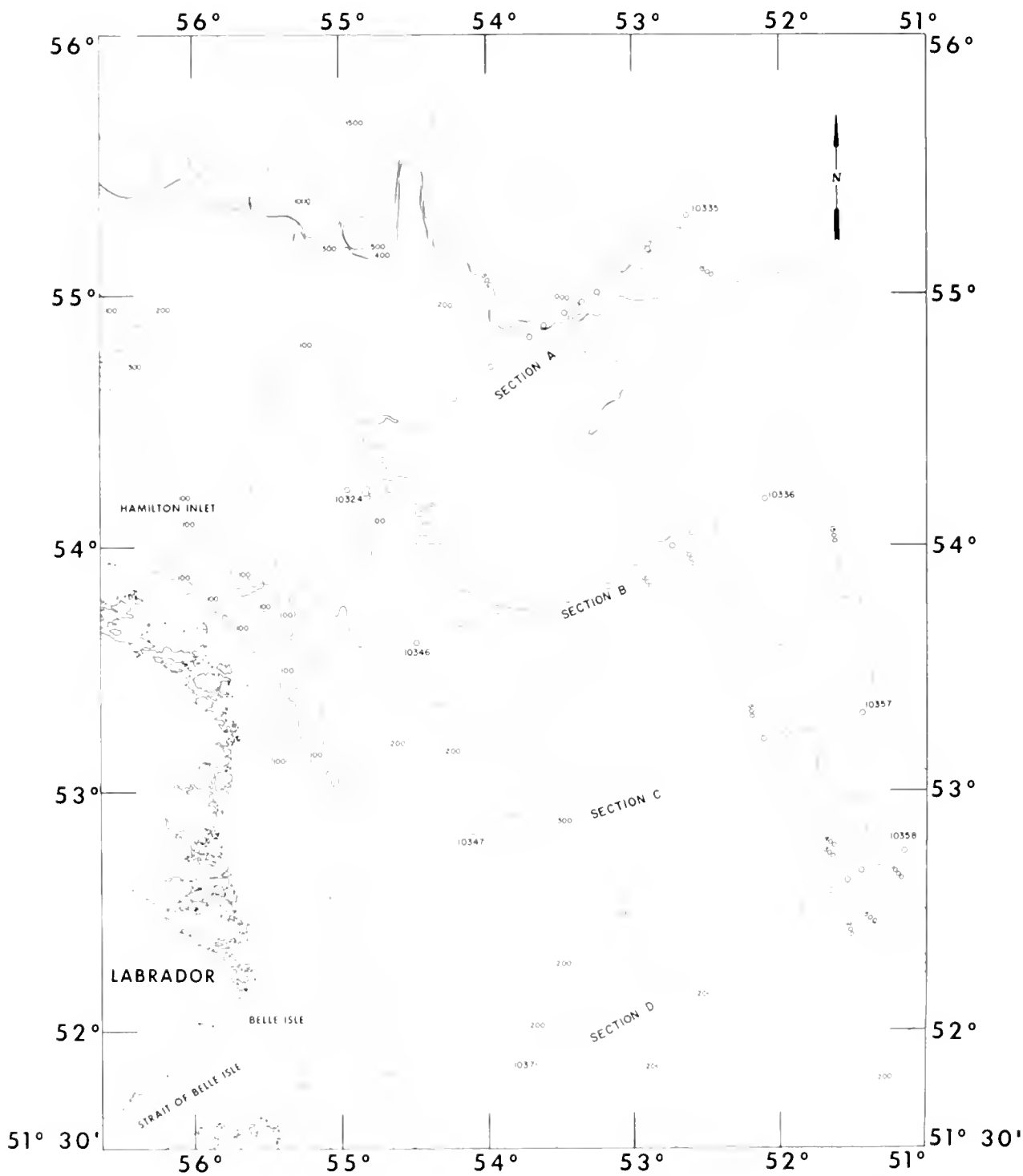


Figure 1. Bathymetric chart of survey area in the western Labrador Sea between Strait of Belle Isle and Hamilton Inlet. Contour interval is 100 fathoms to a depth of 500 fathoms and 500 fathoms thereafter. The chart is adapted from U.S. Naval Oceanographic Office charts BC.0610N and BC.0611N. Station positions are included.

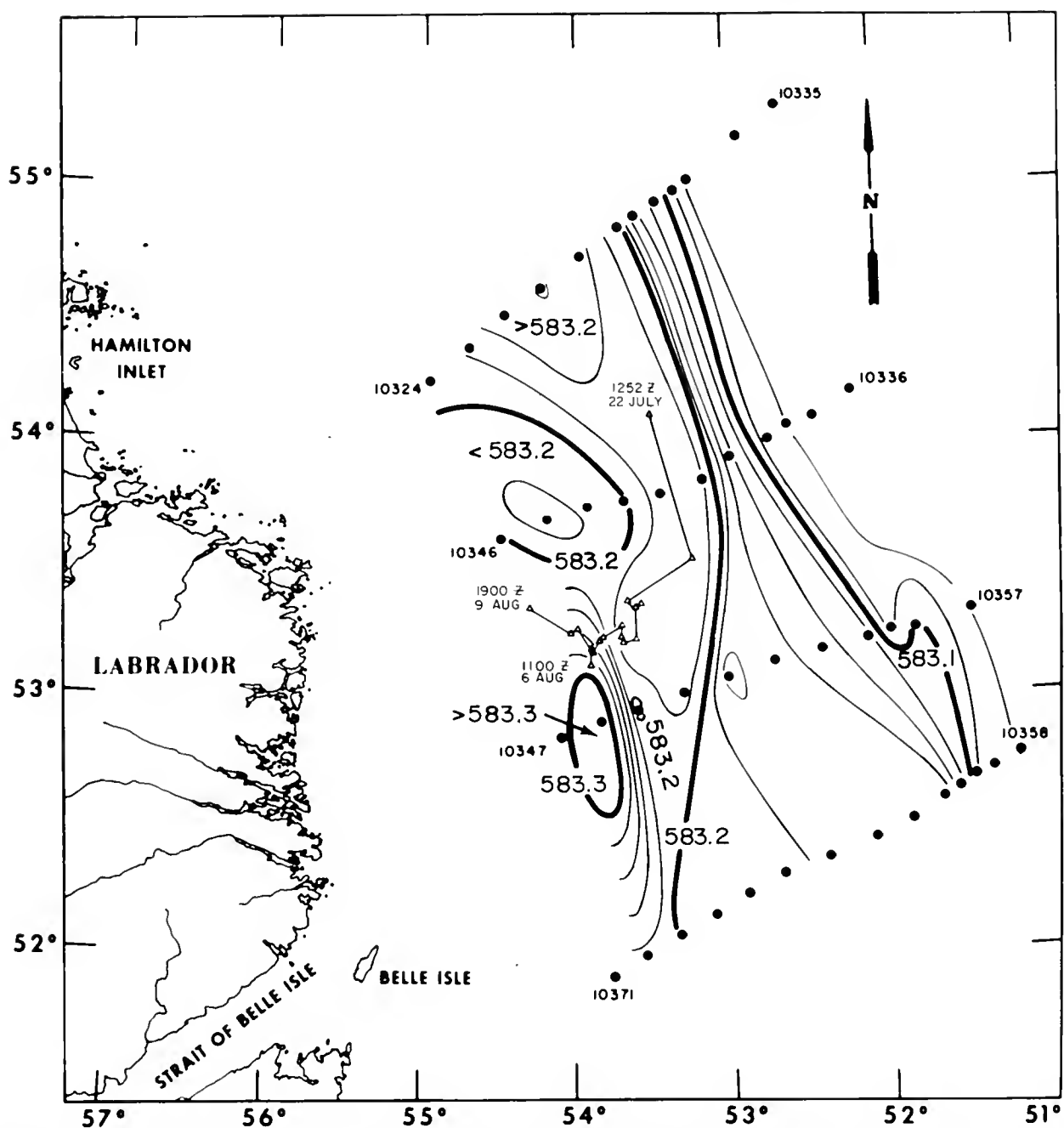


Figure 2. Sea surface dynamic topography (dynamic meters) relative to 600 decibars, 22-26 July 1968. Contour interval is 0.02 dynamic meters. Track line indicates trajectory of iceberg under study.

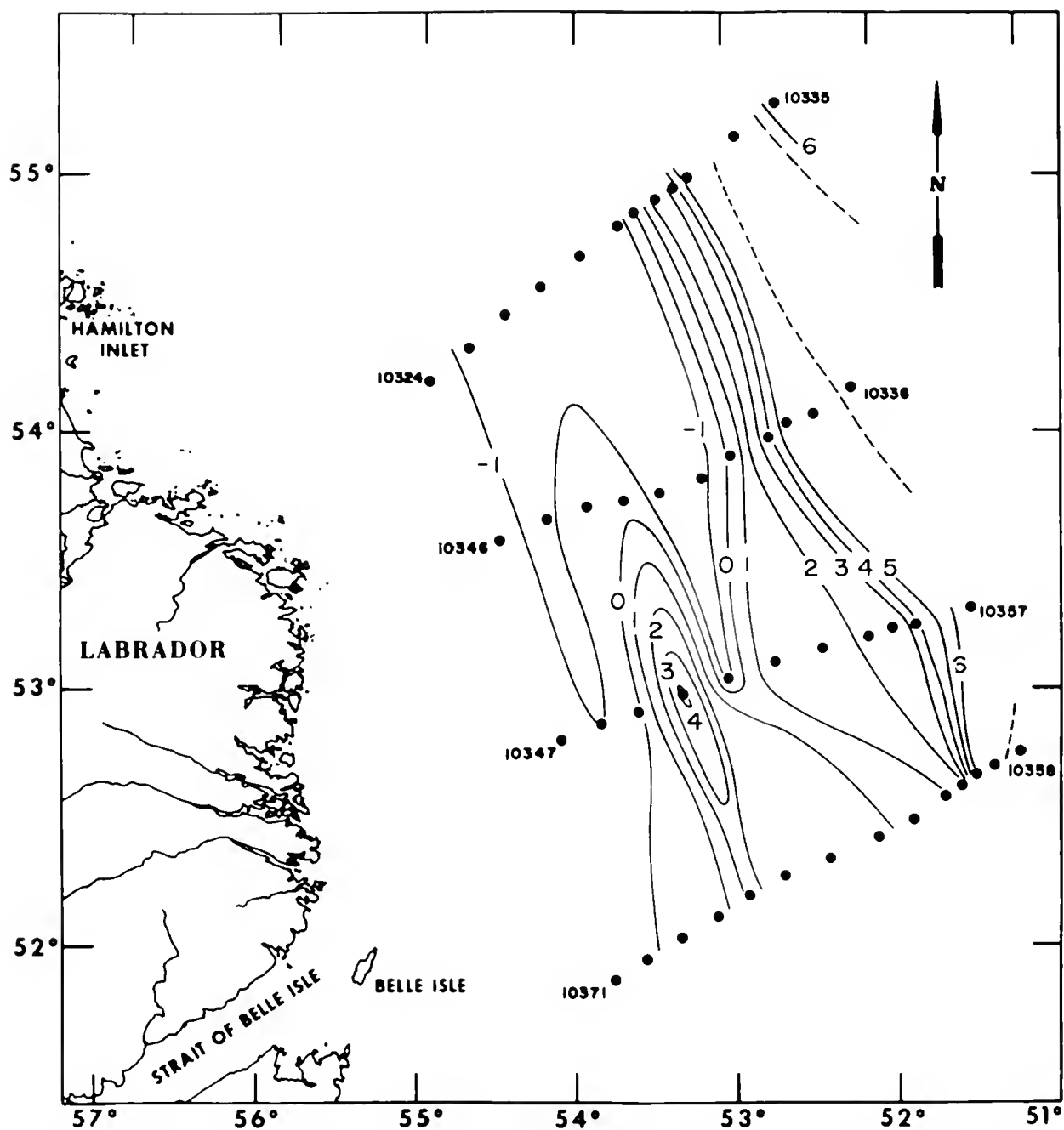


Figure 3. Distribution of temperature ($^{\circ}\text{C}$) upon the $26.50 \sigma_t$ surface, 22-26 July 1968. Dashed line indicates intersection of the $26.50 \sigma_t$ surface with the sea surface.

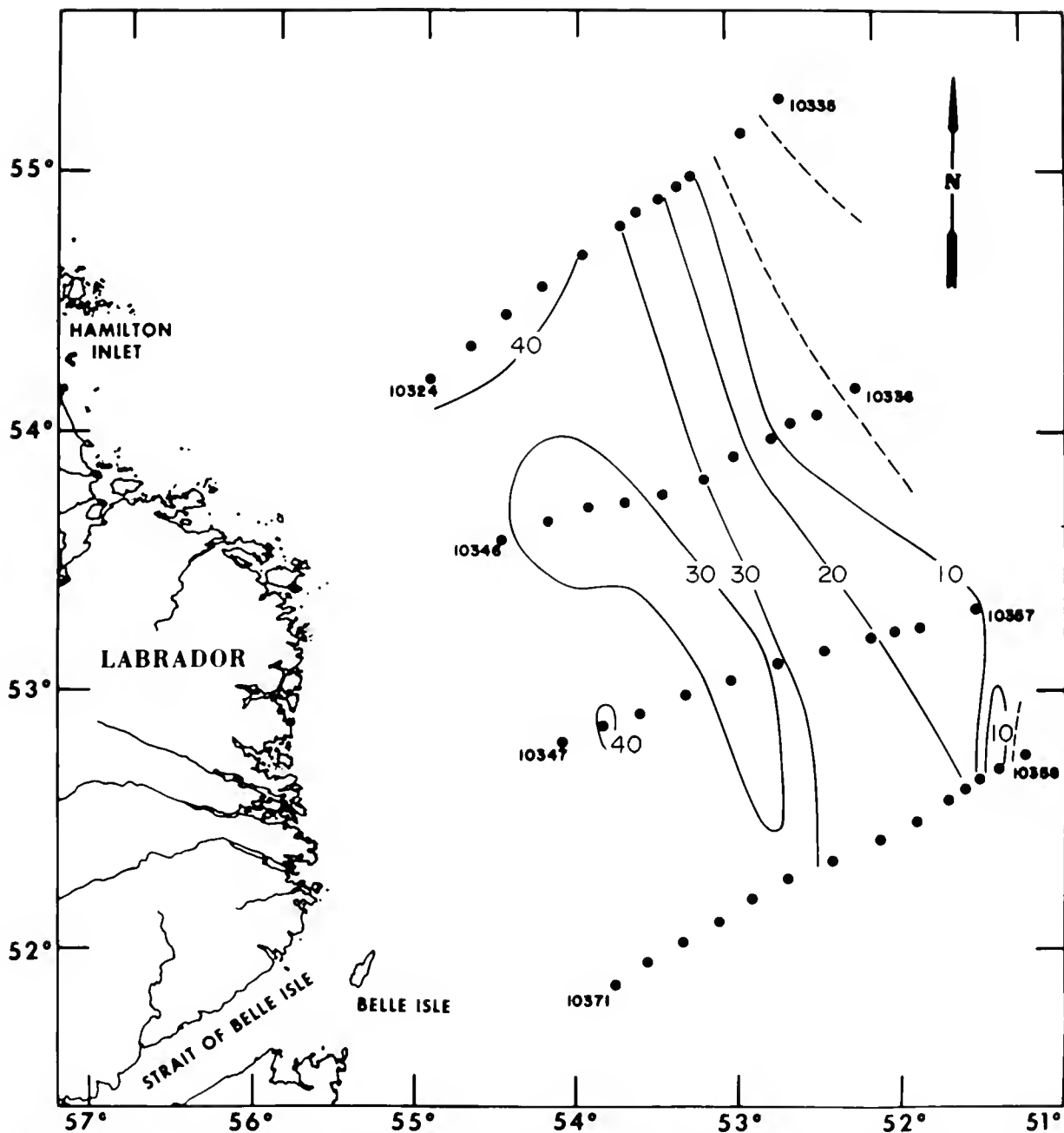


Figure 4. Depth (meters) of the 26.50 σ_t surface, 22–26 July 1968. Dashed line indicates intersection of the 26.50 σ_t surface with the sea surface.

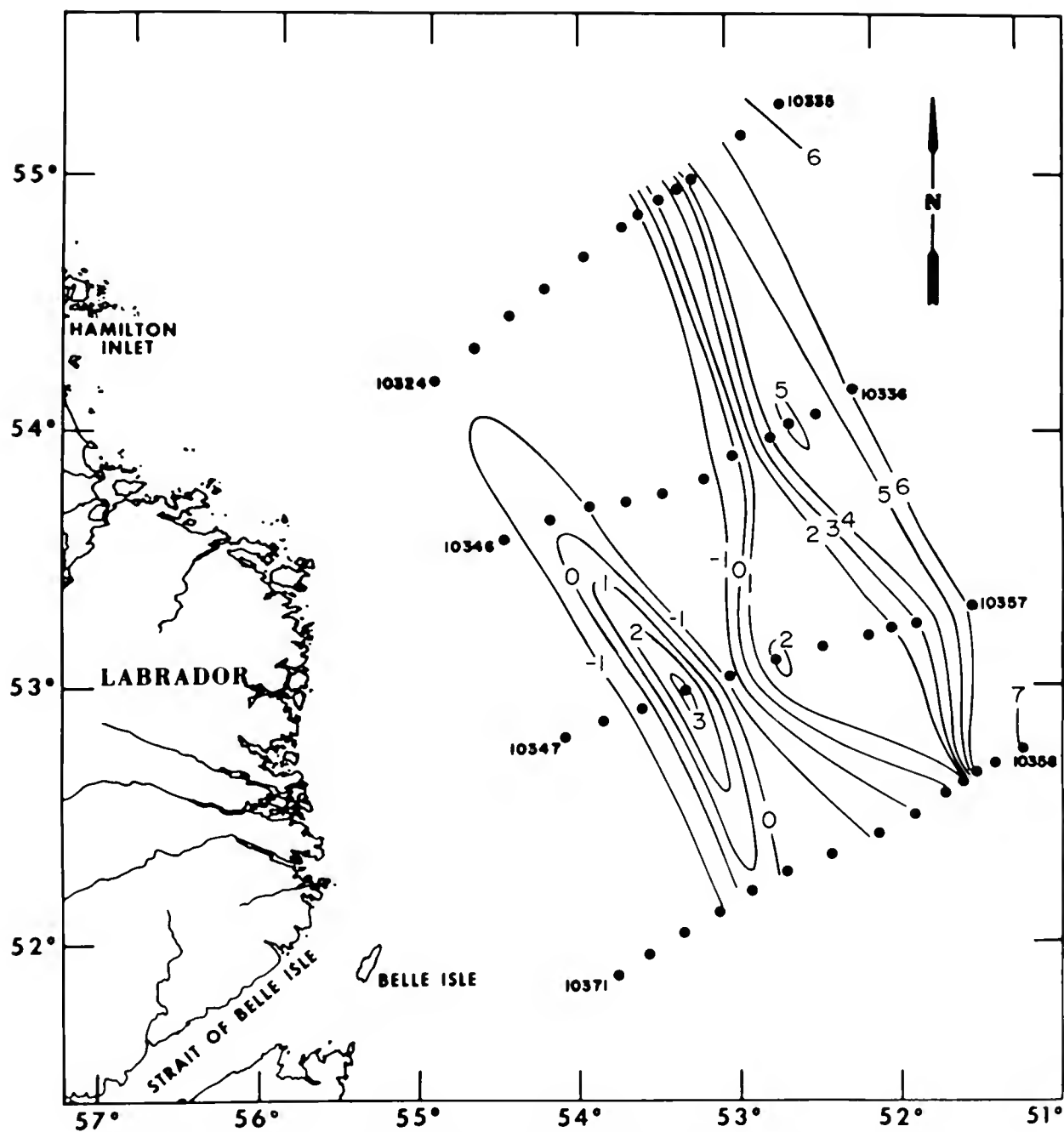


Figure 5. Distribution of temperature (°C) upon the 26.75 σ_t surface, 22-26 July 1968.

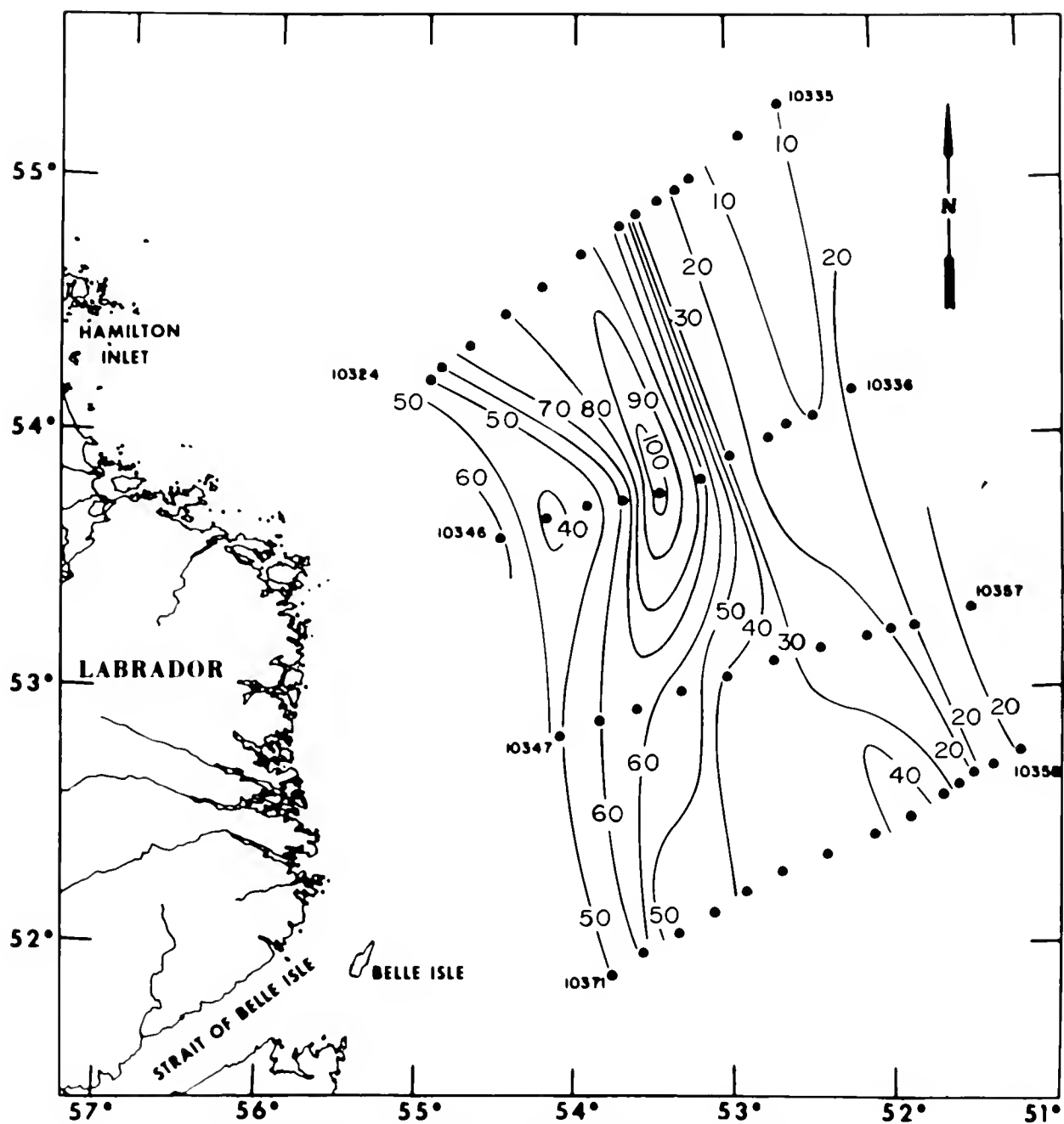


Figure 6. Depth (meters) of the 26.75 σ_t surface, 22-26 July 1968.

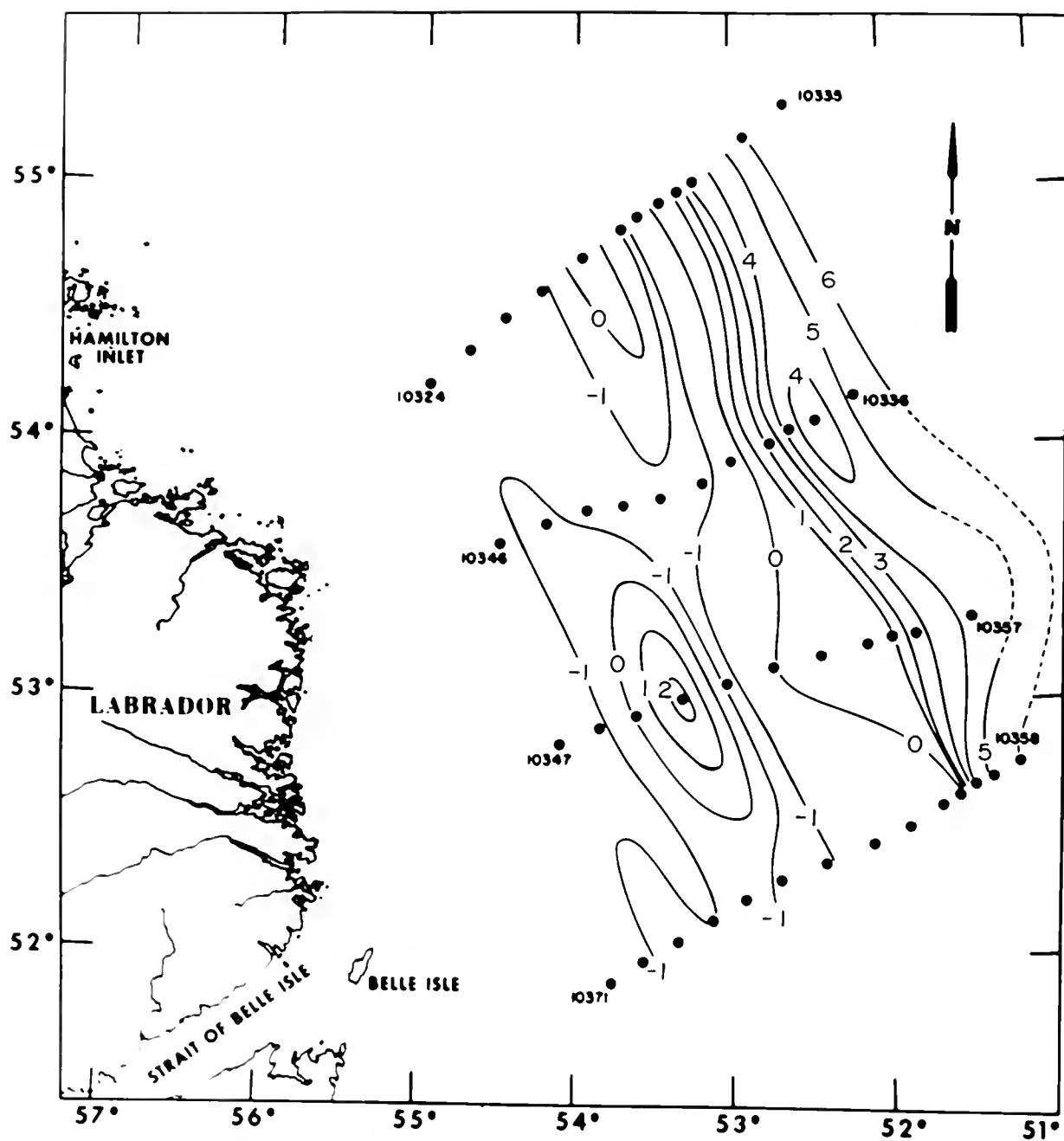


Figure 7. Distribution of temperature (°C) upon the 27.00 σ_t surface, 22–26 July 1968.

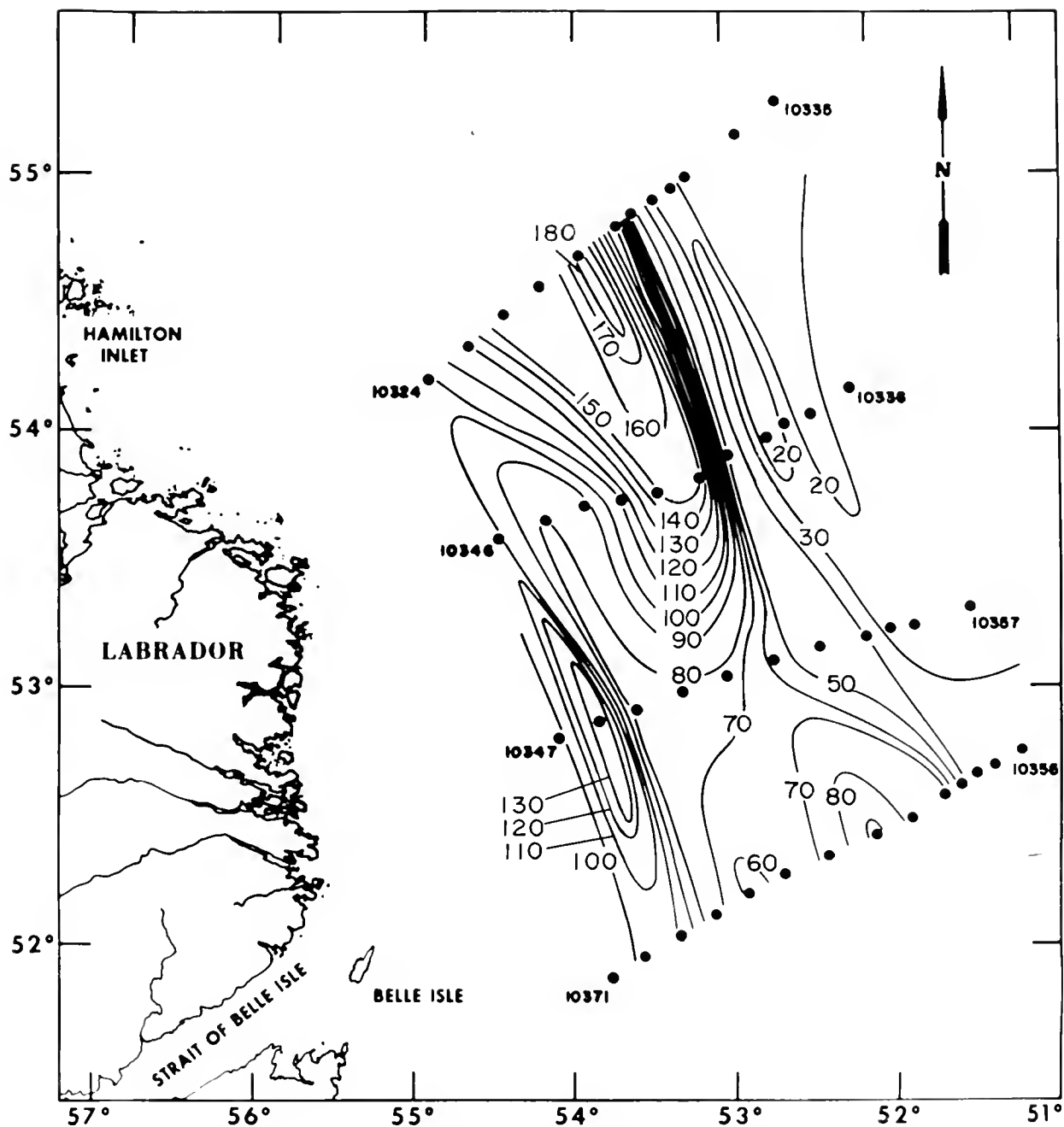


Figure 8. Depth (meters) of the 27.00 σ_t surface, 22-26 July 1968.

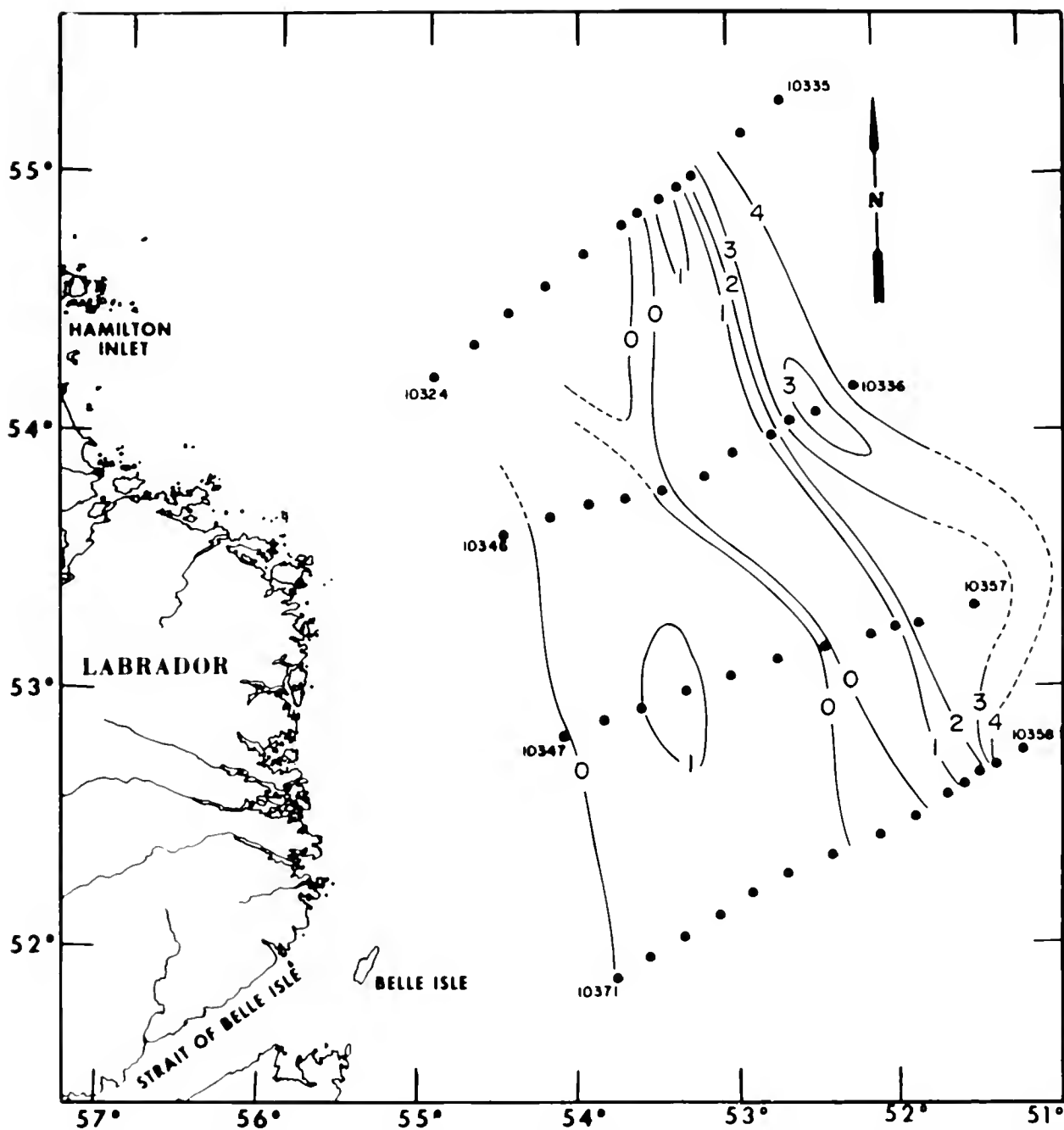


Figure 9. Distribution of temperature (°C) upon the 27.25 σ_t surface, 22-26 July 1968.

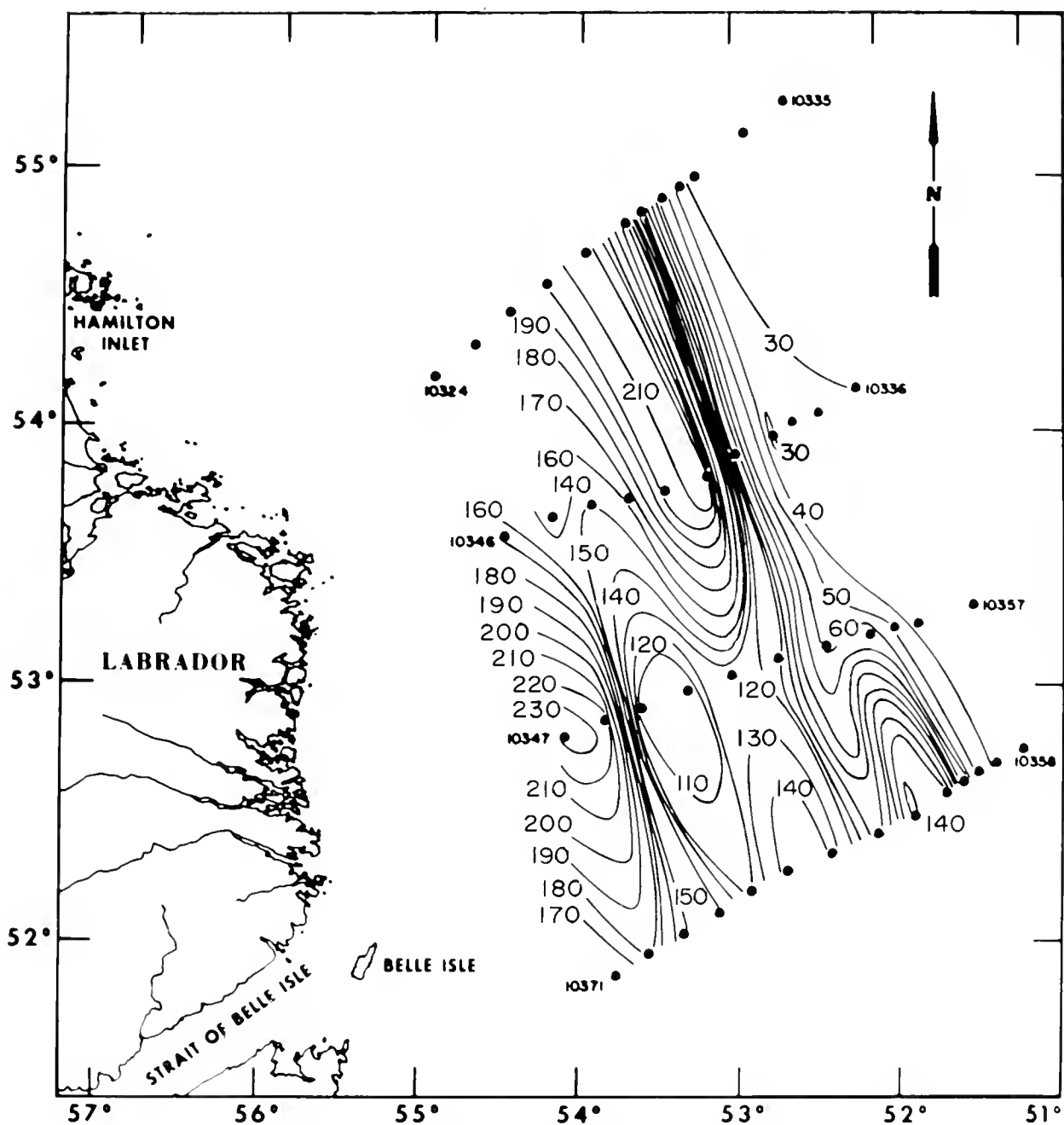


Figure 10. Depth (meters) of the 27.25 σ_t surface, 22-26 July 1968.

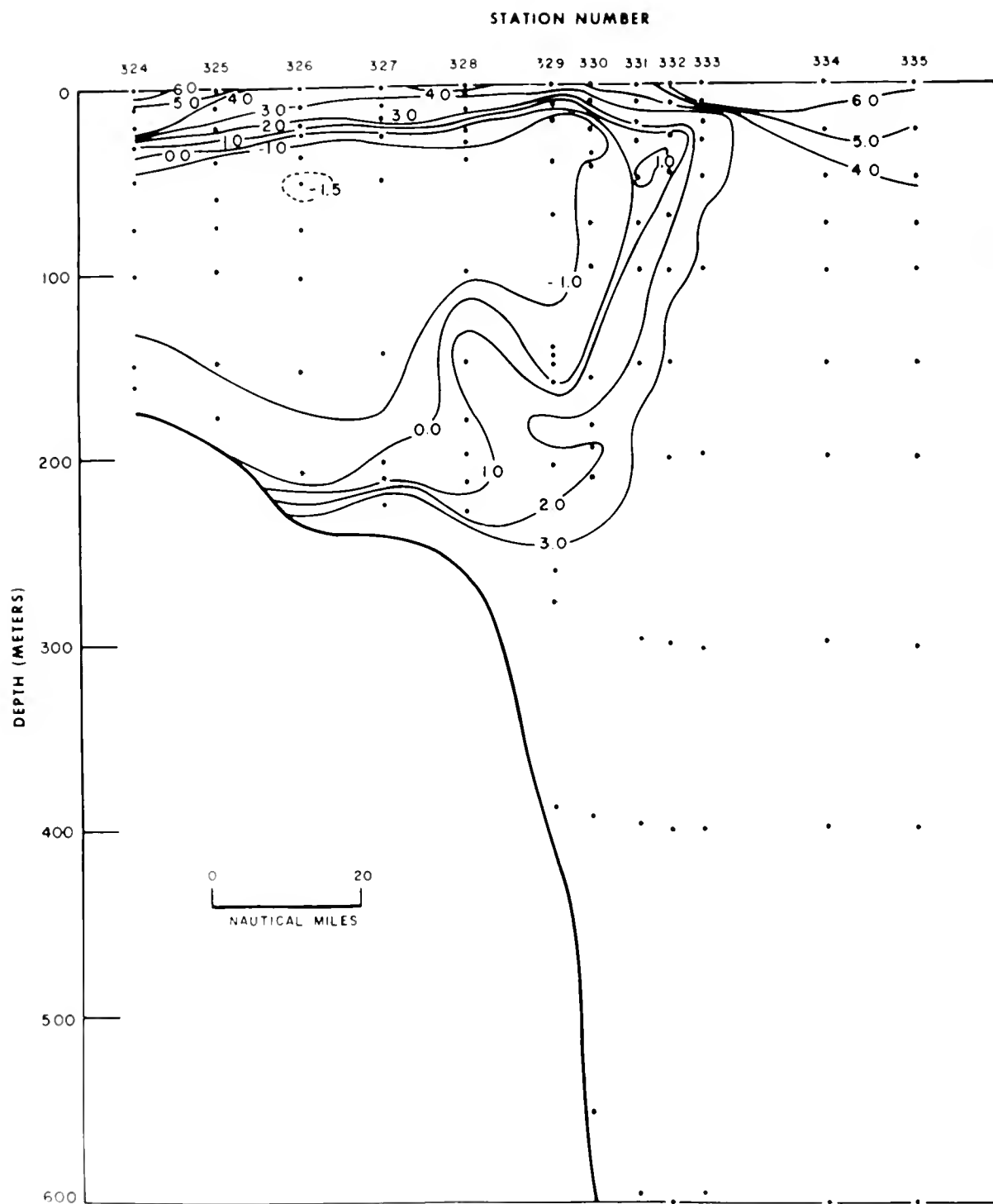


Figure 11. Temperature ($^{\circ}\text{C}$) profile for section A, 22-23 July 1968.

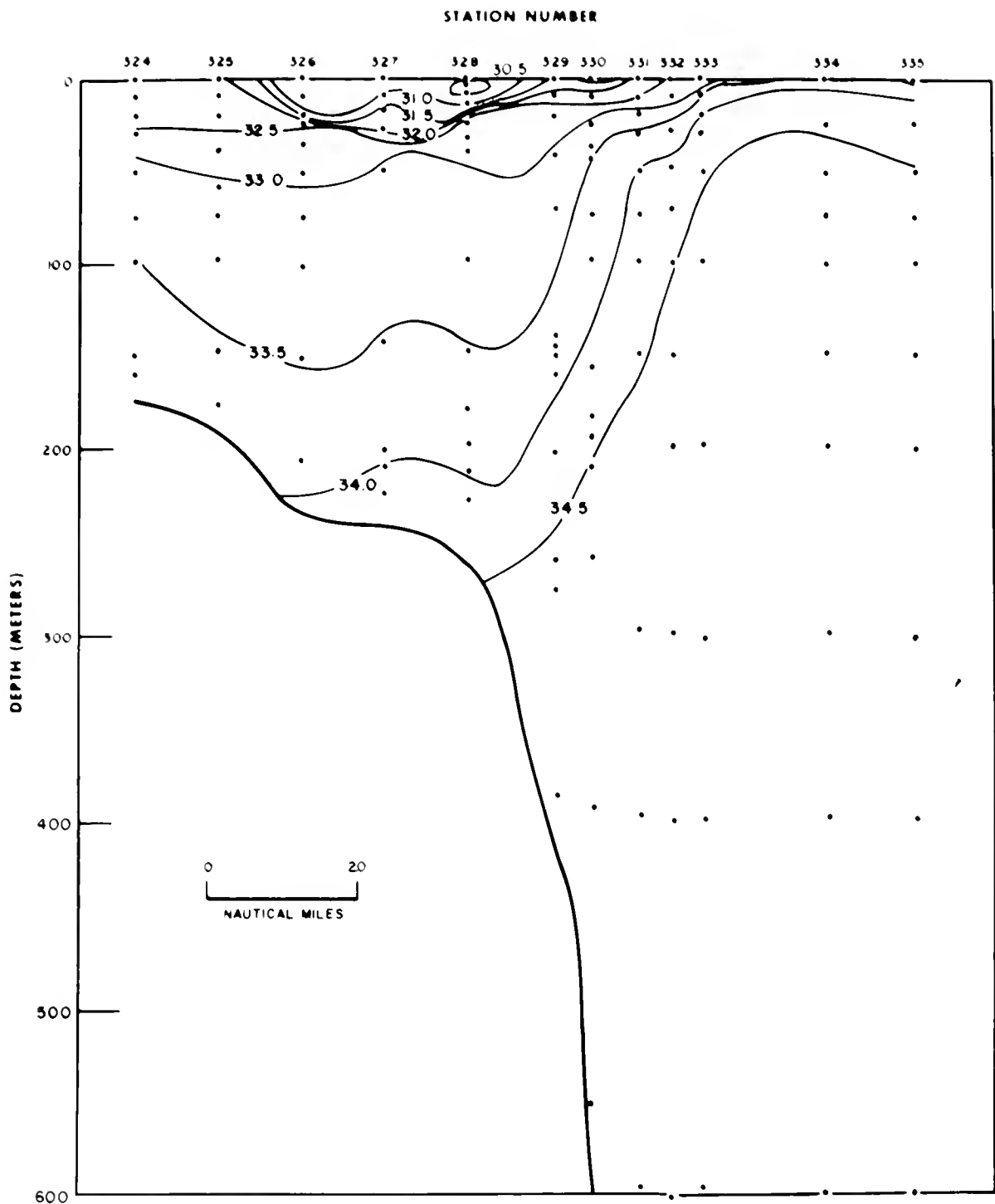


Figure 12. Salinity (‰) profile for section A, 22-23 July 1968.

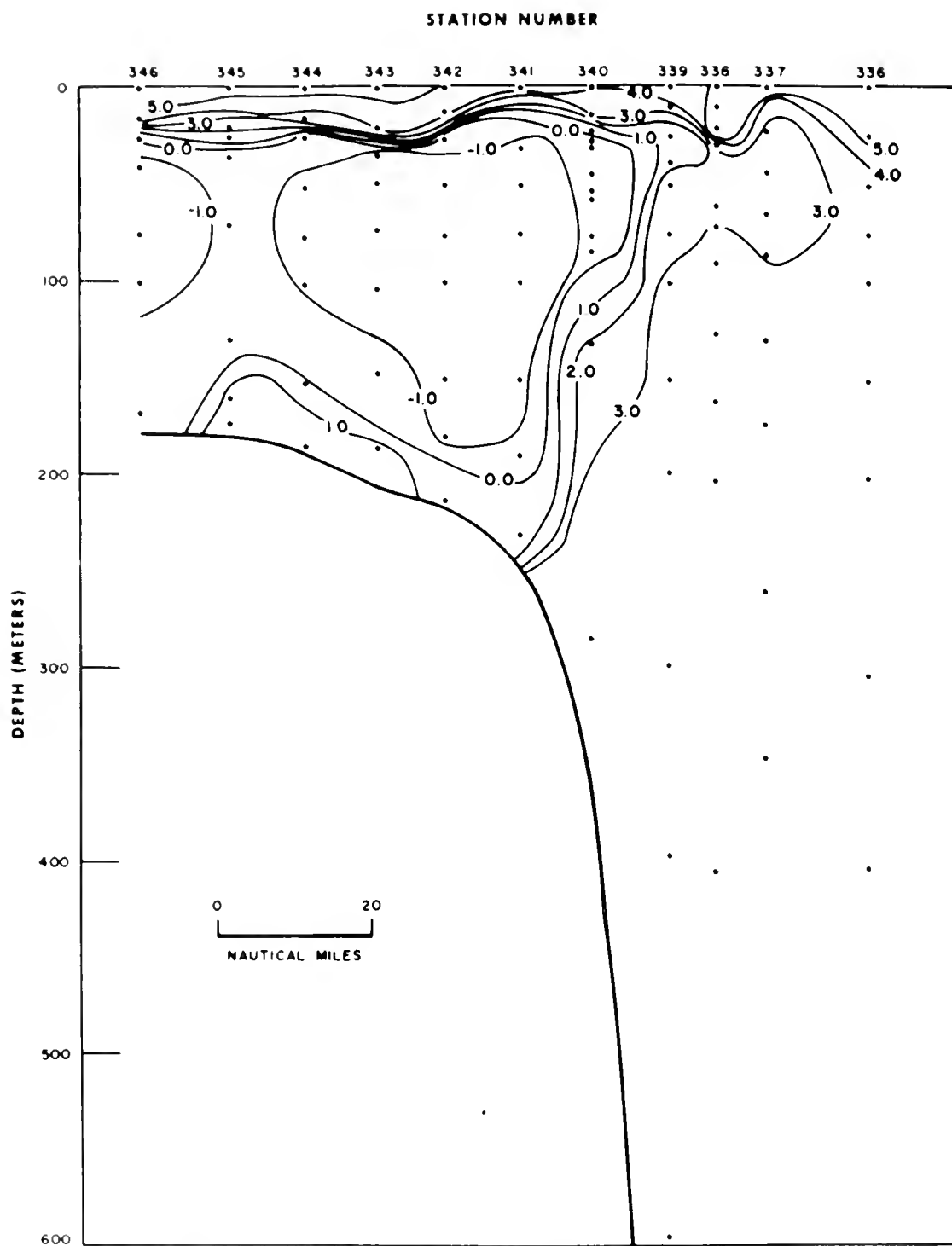


Figure 13. Temperature ($^{\circ}\text{C}$) profile for section B, 24 July 1968.

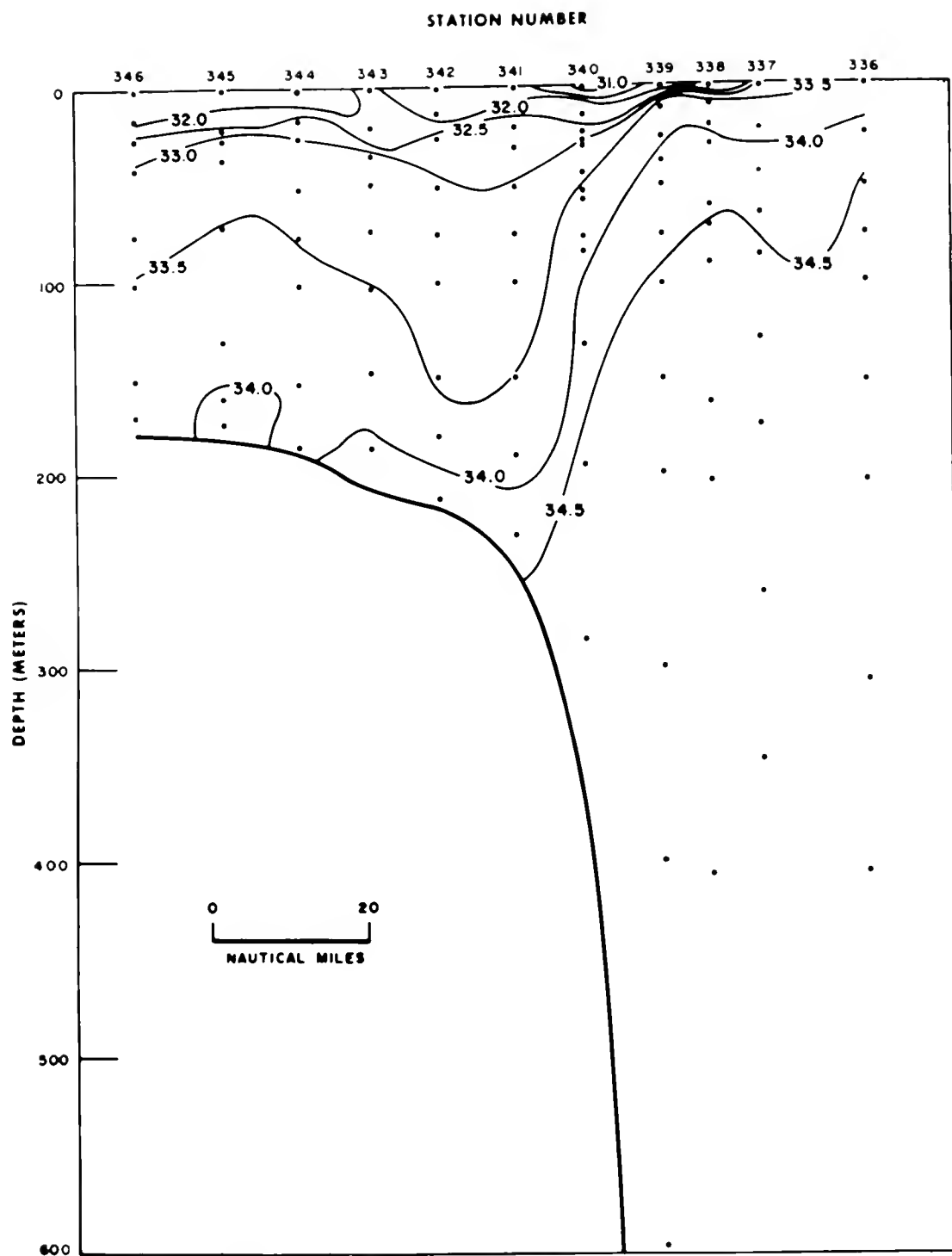


Figure 14. Salinity (‰) profile for section B, 24 July 1968.

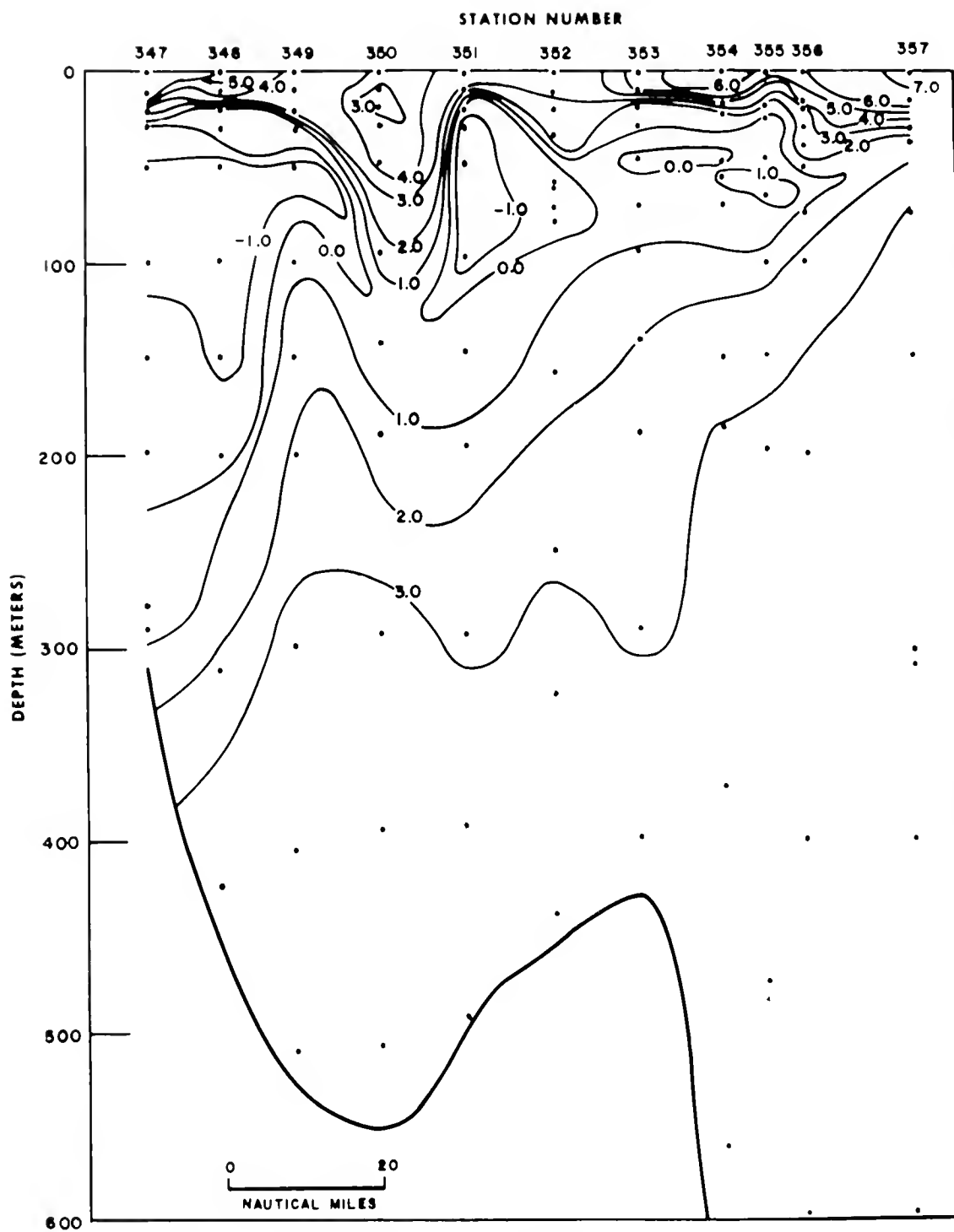


Figure 15. Temperature ($^{\circ}\text{C}$) profile for section C, 25 July 1968.

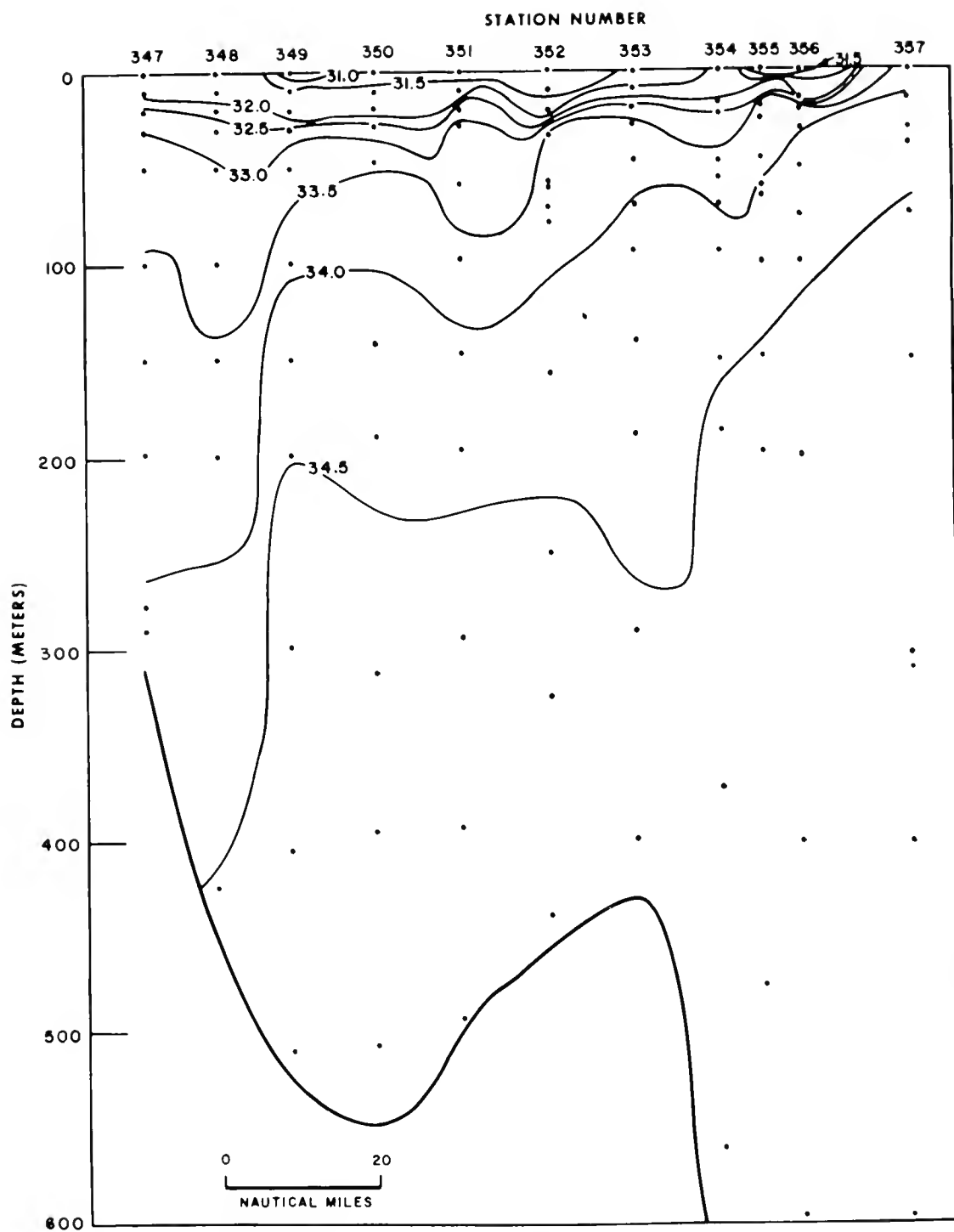


Figure 16. Salinity (%) profile for section C, 25 July 1968.

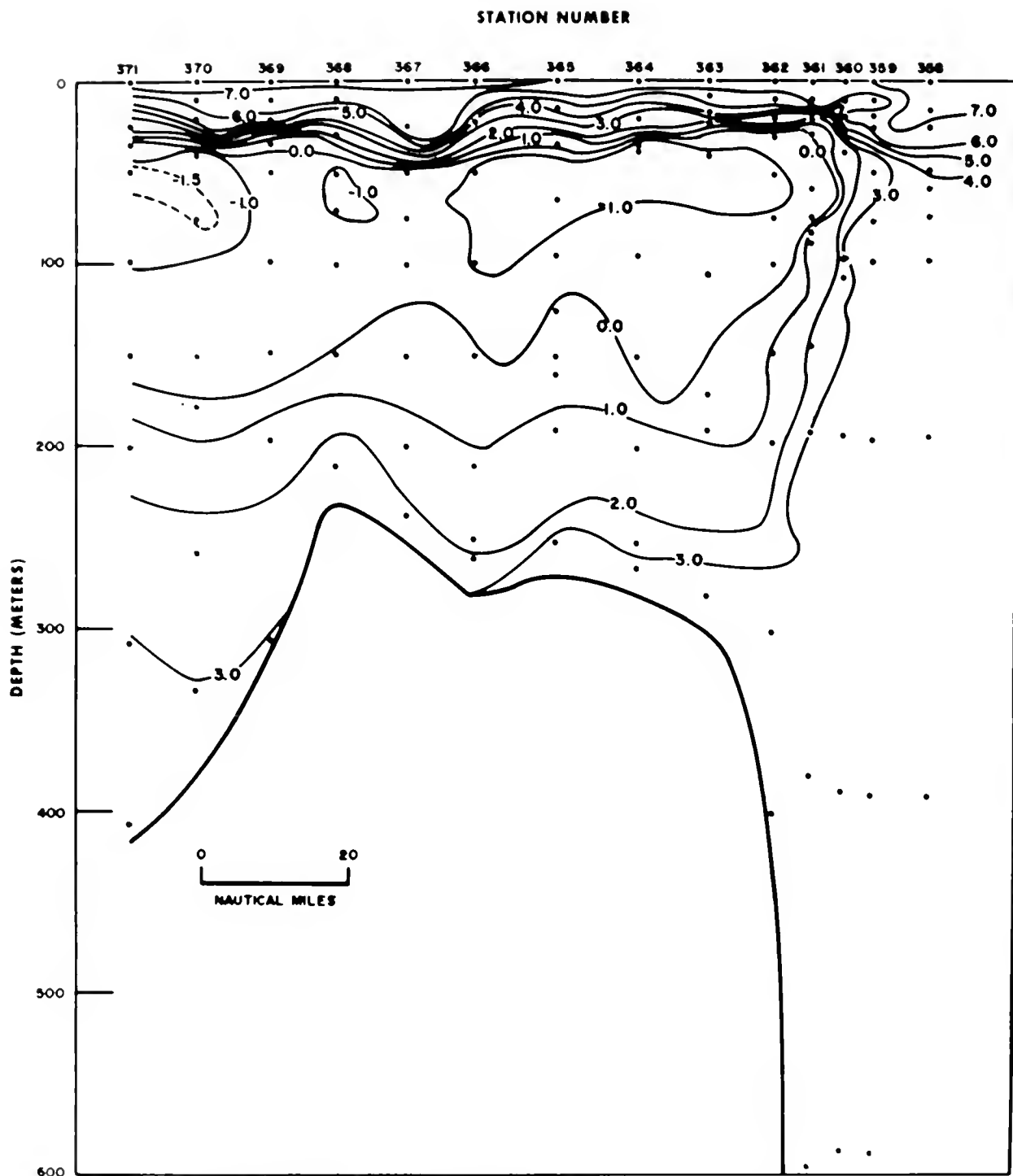


Figure 17. Temperature ($^{\circ}\text{C}$) profile for section D, 26 July 1968.

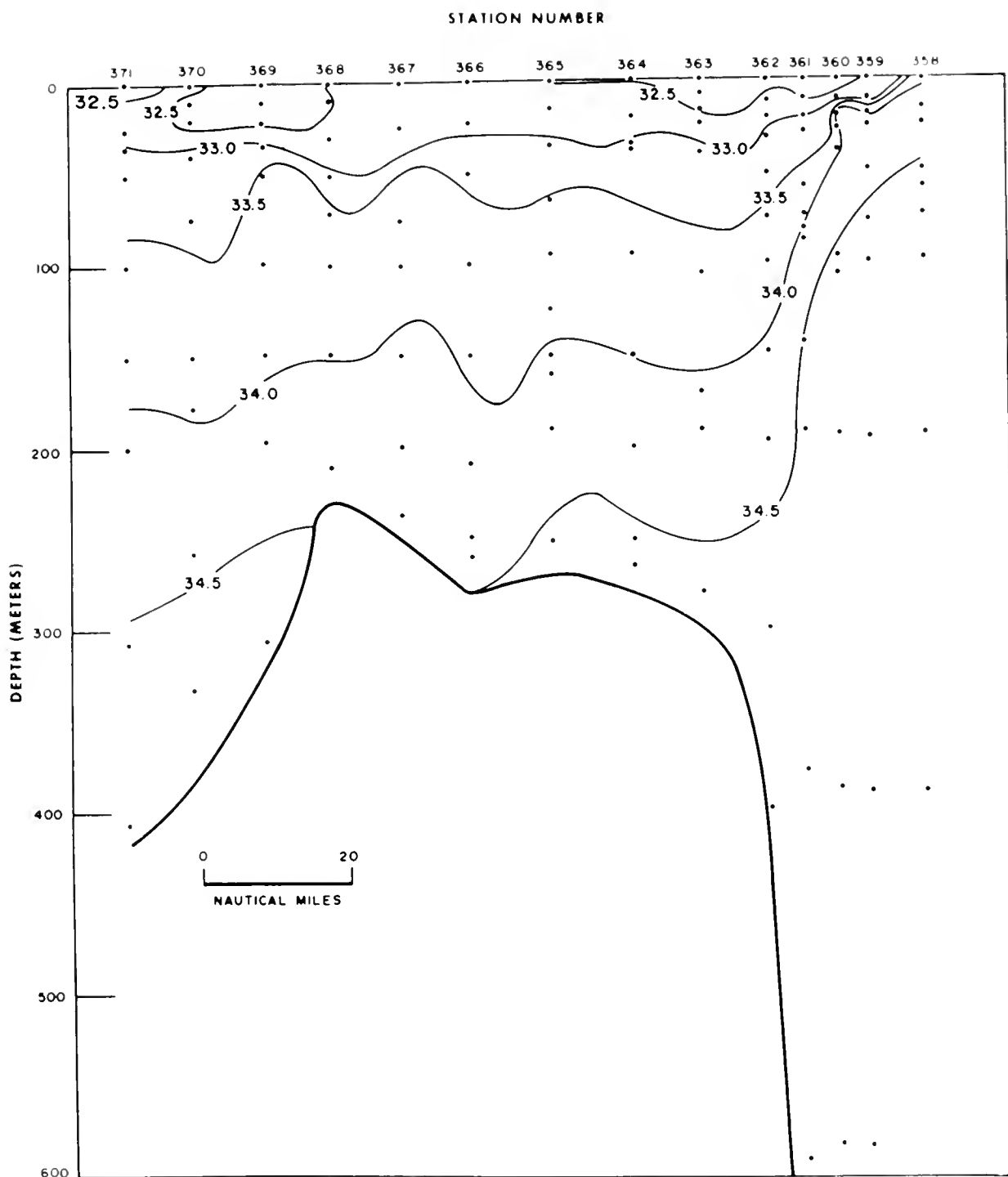


Figure 18. Salinity (%) profile for section D, 26 July 1968.

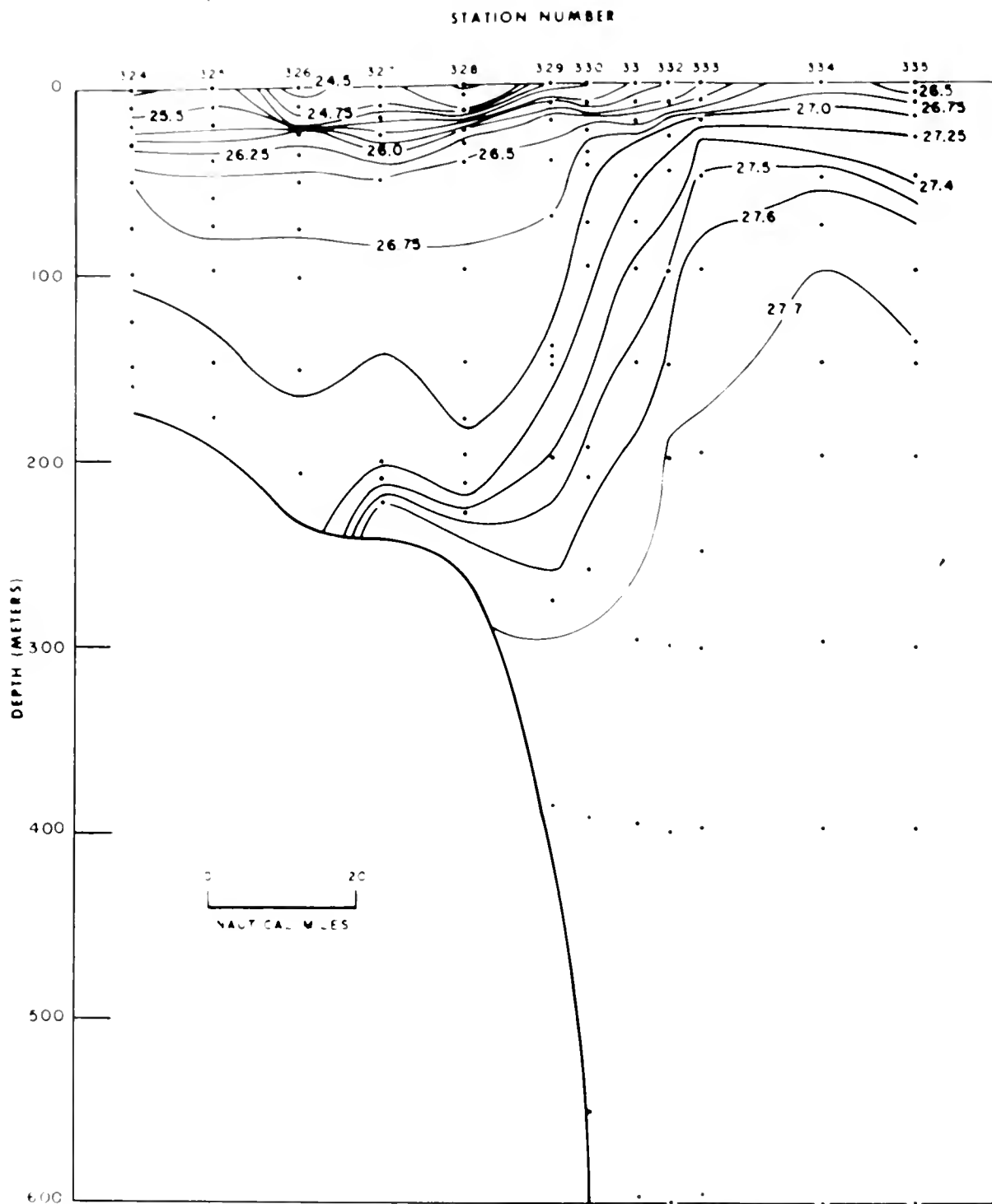


Figure 19. Density (σ_t) profile for section A, 22-23 July 1968. Contour interval is 0.25 for values up to 27.25 and 0.10 for values greater than 27.40.

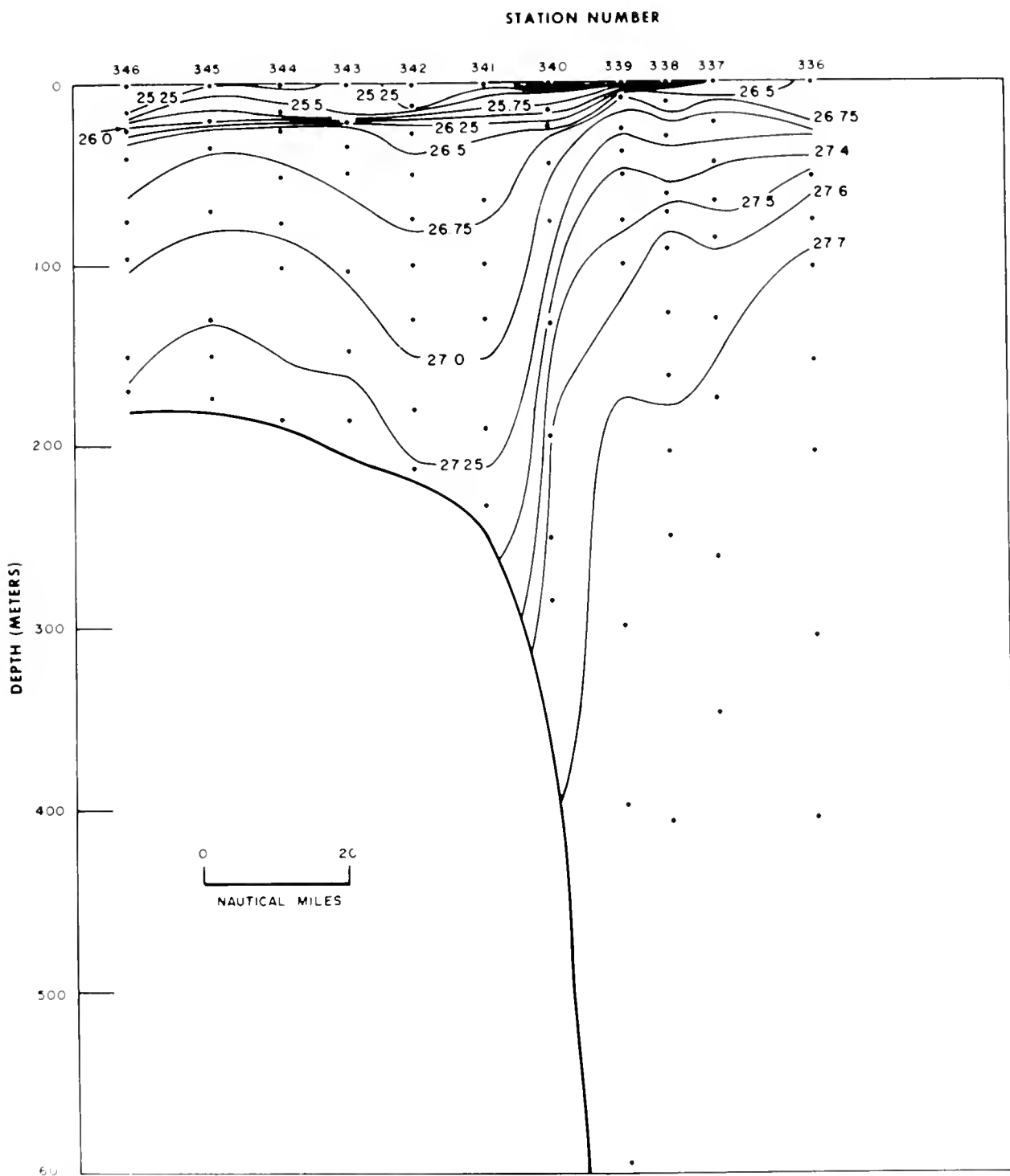


Figure 20. Density (σ_t) profile for section B, 24 July 1968. Contour interval is 0.25 for values up to 27.25 and 0.10 for values greater than 27.40.

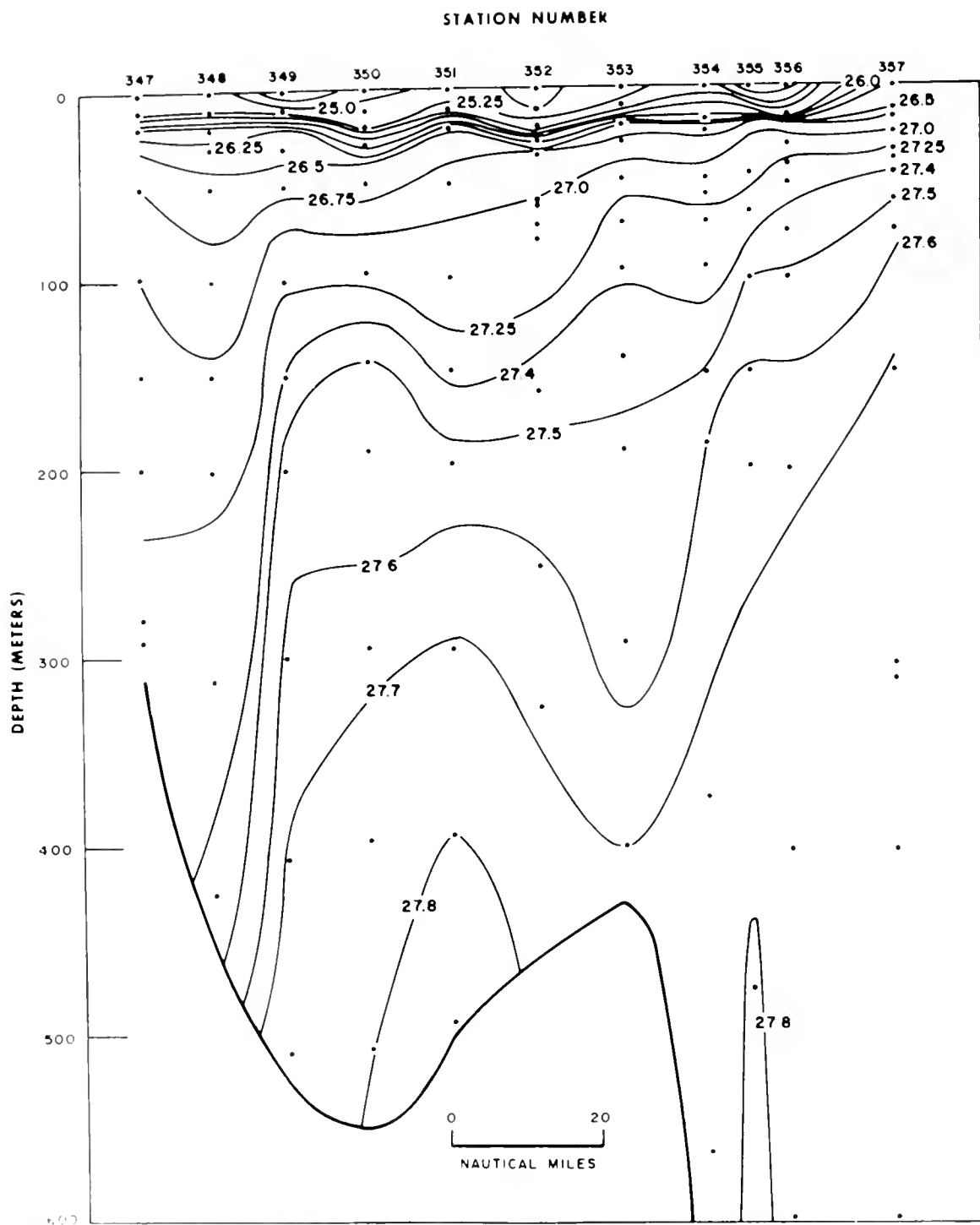


Figure 21. Density (σ_t) profile for section C, 25 July 1968. Contour interval is 0.25 for values up to 27.25 and 0.10 for values greater than 27.40.

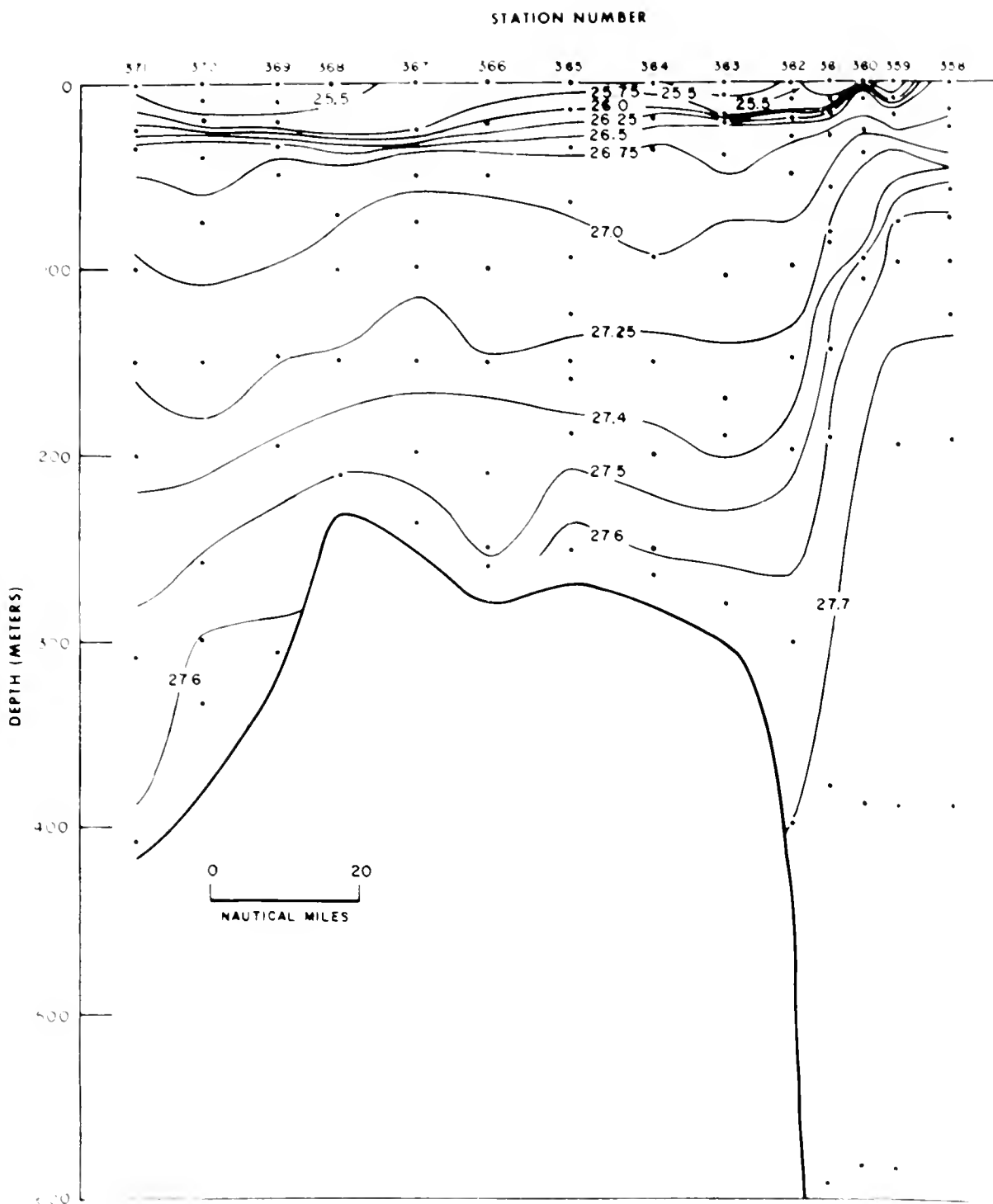


Figure 22. Density (σ_t) profile for section D, 26 July 1968. Contour interval is 0.25 for values up to 27.25 and 0.10 for values greater than 27.40.

APPENDIX A

OCEANOGRAPHIC DATA

A complete description of the codes utilized in the tabulation of oceanographic station data can be found in National Oceanographic Data Center publication M-2, *Processing Physical and Chemical Data from Oceanographic Stations*. (Rev. August 1964, supplement issued May 1966.)

To facilitate use of the oceanographic station data listing, entry headings which are not self-explanatory are described below.

Depth to Bottom	Corrected or uncorrected sounding in meters.
Max. Depth of Samples	Depth of deepest sample to nearest multiple of one hundred meters.
Wave observations:	
DIR.	Round to nearest multiple of ten degrees.
HGT.	In increments of $\frac{1}{2}$ m. Sum of 5 meters plus increments of $\frac{1}{2}$ m if 50 is added to direction.
PER.	If numerals 2 through 9 are entered, period in seconds is twice the numeric entry or $2 \times (\text{numeric entry}) + 1$. For other entries see WMO Code 3155.
SEA	Sea state according to WMO Code 3700.
Weather Code	If preceded by X, weather according to WMO Code 4501. If a two-digit entry, weather according to WMO Code 4677.
Cloud Code:	
Type	Cloud type according to WMO Code 0500.
Amount	Cloud amount in eights. Entry of the numeral 9 indicates cloud amount could not be estimated.
Water:	
Color Code	Color according to Forel-Ule scale.
Trans.	Transparency in whole meters as determined by Secchi disc.
Wind:	
Dir.	Rounded to nearest multiple of ten degrees.
Speed or Force	If preceded by letter S, wind speed in knots, if preceded by letter F, wind force according to Beaufort scale.
Barometer	Barometric pressure given in tens, units and tenths of millibars.
Air Temp. °C	Air temperature to tenths of a degree centigrade.
Vis. Code	Visibility according to WMO Code 4300.
No obs. depths	Number of observed levels associated with the station.
Messenger time	Entered in hours and tenths of an hour GMT. For Nansen casts, indicates time of release of messenger applicable to the observational level. For STD casts, indicates the starting time of lowering the sensor.
Card type	OBS designates observed levels. STD indicates the values at this standard level were interpolated by a modified 3-point LaGrange formula.
Depth (m)	Depth to nearest meter. A postscript T indicates depth was obtained thermometrically; S indicates uncorrected "wire out" depth. Postscript Q indicates value was marked doubtful by originator; P indicates value was considered doubtful by NODC. Postscripts P and Q retain this meaning throughout the following entries.
T °C	Temperature to hundredths of a degree Centigrade.
S ‰	Salinity in parts-per-thousand.
SIGMA-T	Entered to hundredths.
Specific-volume	
Anomaly — $\times 10^7$	Multiply entry by 10^{-7} to obtain specific-volume anomaly in cubic centimeters per gram.
$\Sigma \Delta D$ Dyn. M $\times 10^3$	Multiply entry by 10^{-3} to obtain anomaly of dynamic height in dynamic meters referenced to the sea surface.
Sound Velocity	Sound velocity according to Wilson's formula entered to tenths of a meter per second.
O ₂ ml/l	Dissolved oxygen in milliliters per liter entered to hundredths.
PO ₄ -P $\mu\text{g-at/l}$	Inorganic phosphate in microgram-atoms per liter entered to hundredths.
Total-P $\mu\text{g-at/l}$	Total phosphorus in microgram-atoms per liter entered to hundredths.
NO ₂ -N $\mu\text{g-at/l}$	Nitrite-nitrogen in microgram-atoms per liter entered to hundredths.
NO ₃ -N $\mu\text{g-at/l}$	Nitrate-nitrogen in microgram-atoms per liter entered to tenths.
SiO ₄ -Si $\mu\text{g-at/l}$	Silicate-silicon in microgram-atoms per liter entered to whole units.
pH	Entered to hundredths.

Table 1. Observed and interpolated data for stations taken by USCGC EVERGREEN from 22 to 26 July during the 1968 International Ice Patrol. The data listings were prepared from NODC listing No. 31-1260.

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	WATER SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
STATION CODE	ID. NO.					10°	1°	MO	DAY		HR. 1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA	
311260	EV	54134N	054565W	186	44	07	22	224	1968	11P	10324	0174	02	34	2	3		X1	4	1	0001
				DEPTH METER	WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
					COLOR CODE	TRANS. M	DIR.	SPEED OF FORCE		DRY BULB	WET BULB										
								09	508	230	117	094	9	09							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t ?	Σ Δ D DYN. M x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₃ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -S μg - dl/l	pH	ST C				
		STD	0000	0656	3206	2518	0027929	0000	14734												
	224	OBS	0000	0656	32056	2518			14734												
		STD	0010	0492	3219	2548	0025125	0027	14671												
	224	OBS	0010	0492	32185	2548			14671												
		STD	0020	0465	3222	2553	0024594	0051	14662												
	224	OBS	0020	0465	32220	2553			14662												
		STD	0030	0099	3269	2622	0018107	0073	14511												
	224	OBS	0030	0099	32693	2622			14511												
		STD	0050	-0127	3321	2673	0013206	0104	14417												
	224	OBS	0050	-0127	33205	2673			14417												
		STD	0075	-0143	3338	2687	0011826	0135	14416												
	224	OBS	0075	-0143	33377	2687			14416												
		STD	0100	-0136	3350	2697	0010857	0164	14425												
	224	OBS	0100	-0136	33504	2697			14425												
		STD	0125	-0131	3357	2703	0010352	0190	14433												
		STD	0150	-0078	3375	2715	0009193	0215	14464												
	224	OBS	0150	-0078	33745	2715			14464												
	224	OBS	0160	-0043	33841	2721			14483												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	WATER SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
STATION CODE	ID. NO.					10°	1°	MO	DAY		HR. 1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA	
311260	EV	54207N	05442 W	186	44	07	23	007	1968	11P	10325	0192	02	34	2	3		X1	0	2	0002
				DEPTH METER	WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
					COLOR CODE	TRANS. M	DIR.	SPEED OF FORCE		DRY BULB	WET BULB										
								12	506	230	078	061	8	09							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t ?	Σ Δ D DYN. M x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₃ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -S μg - dl/l	pH	ST C				
		STD	0000	0515	3210	2538	0026034	0000	14678												
	007	OBS	0000	0515	32095	2538			14678												
		STD	0010	0384	3212	2553	0024587	0025	14625												
	007	OBS	0010	0384	32117	2553			14625												
		STD	0020	0281	3225	2573	0022727	0049	14584												
	007	OBS	0020	0281	32248	2573			14584												
		STD	0030	0028	3261	2619	0018365	0070	14478												
	007	OBS	0039	-0113	32856	2644			14417												
		STD	0050	-0128	3300	2656	0014775	0103	14414												
	007	OBS	0059	-0134	33096	2664			14414												
	007	OBS	0074	-0134	33186	2672			14418												
		STD	0075	-0134	3319	2672	0013285	0138	14418												
	007	OBS	0098	-0131	33319	2682			14425												
		STD	0100	-0131	3333	2683	0012205	0170	14425												
		STD	0125	-0129	3343	2691	0011429	0199	14432												
	007	OBS	0148	-0128	33564	2702			14438												
		STD	0150	-0125	3358	2703	0010280	0226	14440												
	007	OBS	0177	-0058	33779	2717			14479												

WISSENS- TIME NO	CAST NO	CARD TYPE	DEPTH M	T °C	S %	SIGMA-T	PRESSURE ANOMALY DB	3.5 DIN M 10 ²	SOUND VELOCITY	DZ	PO-1 DB-1	TOTAL-1 DB-1	NO-1-1 DB-1	NO-1-2 DB-1	S.O.-5 DB-1	BM
		STD	0000	0378	3075	2446	0034821	0000	14602							
014		OBS	0000	0378	30754	2446			14602							
		STD	0010	0297	3078	2455	0033943	0034	14569							
014		OBS	0010	0297	30783	2455			14569							
		STD	0020	0174	3116	2494	0030207	0066	14522							
014		OBS	0020	0174	31162	2494			14522							
014		OBS	0025	-0032	32450	2609			14447							
		STD	0030	-0081	3262	2624	0017846	0090	14427							
014		OBS	0036	-0124	32781	2639			14410							
		STD	0050	-0150	3295	2653	0015101	0123	14403							
014		OBS	0051	-0151	32956	2653			14403							
		STD	0075	-0136	3312	2666	0013817	0160	14416							
014		OBS	0076	-0135	33128	2667			14417							
		STD	0100	-0135	3323	2675	0012959	0193	14422							
014		OBS	0102	-0135	33240	2676			14423							
		STD	0125	-0131	3336	2686	0011960	0224	14430							
		STD	0150	-0122	3348	2695	0011055	0253	14440							
014		OBS	0152	-0121	33485	2695			14441							
		STD	0200	-0092	3364	2707	0009917	0305	14465							
014		OBS	10207	-0087	33662	2709			14468							

MESSAGE NO	CACT TYPE	DEPTH	TIME	STATION	SIGNAL	3-D O AND MAGNITUDE	3-D O EPOCH	SOUND VELOCITY	DATE	TIME	TIME
	STD	0000	0357	3088	2458	0033705	0000	14595			
030	OBS	0000	0357	30878	2458			14595			
	STD	0010	0286	3106	2478	0031737	0033	14568			
030	OBS	0010	0286	31063	2478			14568			
030	OBS	0017	0330	31617	2519			14596			
	STD	0020	0181	3169	2536	0026238	0062	14532			
030	OBS	0026	-0053	31873	2563			14429			
	STD	0030	-0066	3210	2582	0021881	0086	14427			
	STD	0050	-0122	3303	2659	0014532	0122	14417			
030	OBS	0050	-0122	33034	2659			14417			
	STD	0075	-0122	3317	2670	0013475	0157	14423			
	STD	0100	-0121	3330	2680	0012466	0190	14430			
	STD	0125	-0120	3344	2692	0011381	0219	14436			
030	OBS	0143	-0120	33545	2700			14441			
	STD	0150	-0119	3359	2703	0010255	0246	14443			
	STD	0200	0003	3388	2722	0008535	0293	14512			
030	OBS	0201	0007	33885	2722			14514			
030	OBS	0210	0051	34045	2733			14538			
030	OBS	10224	0371	34708	2761			14689			

REFERENCE	SHIP CODE	LATITUDE	LONGITUDE	TIME HOUR	W. EISEN SQUARE	STATION TIME	YEAR	ORIGINATOR	DEPTH	WAVE DEPTH	WAVE OBSERVATIONS	WAVE CODE	WAVE CODE	WAVE CODE
311260 EV	54429N	053578W	186	43	07	23	044	1968	11P	10328	0265	02	34	1 3
11 503 220 072 061 8 12														

MISSING TIME	CAST NO.	TYPE	DEPTH M	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE
044	STD	0000	0406	3051	2424	0036933	0000	14611						
044	OBS	0000	0406	30507	2424			14611						
044	OBS	0004	0351	30469	2426			14587						
044	STD	0010	0274	3051	2435	0035839	0036	14556						
044	OBS	0013	0226	30718	2455			14538						
044	STD	0020	0060	3209	2575	0022493	0066	14483						
044	OBS	0024	-0008	32554	2616			14459						
044	STD	0030	-0072	3278	2637	0016651	0085	14434						
044	OBS	0031	-0081	32809	2639			14430						
044	OBS	0040	-0147	32931	2651			14402						
044	STD	0050	-0145	3301	2658	0014654	0116	14406						
044	STD	0075	-0139	3319	2672	0013271	0151	14416						
044	OBS	0099	-0133	33334	2684			14424						
044	STD	0100	-0125	3334	2684	0012147	0183	14428						
044	STD	0125	0041	3344	2685	0012088	0213	14511						
044	OBS	0148	0115	33534	2688			14549						
044	STD	0150	0115	3354	2689	0011771	0243	14550						
044	OBS	0179	0095	33647	2698			14547						
044	OBS	0198	0059	33722	2707			14535						
044	STD	0200	0039	3373	2708	0009865	0297	14526						
044	OBS	0213	0003	33869	2721			14514						
044	OBS	0228	0170	34296	2745			14597						

REFERENCE	SHIP CODE	LATITUDE	LONGITUDE	TIME HOUR	W. EISEN SQUARE	STATION TIME	YEAR	ORIGINATOR	DEPTH	WAVE DEPTH	WAVE OBSERVATIONS	WAVE CODE	WAVE CODE	WAVE CODE
311260 EV	54498N	053423W	186	43	07	23	082	1968	11P	10329	0410	04	34	1 2
08 505 210 072 058 8 13														

MISSING TIME	CAST NO.	TYPE	DEPTH M	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE	WAVE CODE
082	STD	0000	0346	3141	2501	0029620	0000	14597						
082	OBS	0000	0346	31406	2501			14597						
082	STD	0010	0047	3229	2592	0020912	0025	14478						
082	OBS	0010	0047	32289	2592			14478						
082	STD	0020	-0144	3281	2642	0016190	0044	14399						
082	OBS	0020	-0144	32813	2642			14399						
082	STD	0030	-0143	3295	2653	0015133	0059	14403						
082	OBS	0041	-0142	33075	2663			14407						
082	STD	0050	-0141	3314	2668	0013666	0058	14410						
082	OBS	0070	-0135	33287	2680			14418						
082	STD	0075	-0131	3332	2682	0012328	0121	14421						
082	STD	0100	-0111	3346	2693	0011267	0150	14437						
082	STD	0125	-0090	3361	2704	0010218	0177	14451						
082	OBS	0140	-0078	33693	2711			14462						
082	OBS	0145	-0033	33802	2718			14485						
082	STD	0150	0025	3383	2717	0009070	0201	14513						
082	OBS	0150	0025	33825	2717			14513						
082	OBS	0160	0000	33855	2720			14503						
082	STD	0200	0109	3418	2742	0006889	0241	14564						
082	OBS	10203	0119	34200	2741			14566						
082	STD	0250	0312	3459	2757	0005462	0272	14667						
082	OBS	0260	0334	34656	2760			14679						
082	OBS	*0276	0355	34738	2765			14690						
082	STD	0300	0358	3483	2772	0004149	0296	14698						
082	OBS	*0386	0368	34866	2773			14717						

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WAVE SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS	WAVE CODE	CLOUD CODES	NODE STATION NUMBER		
CRUISE NO.	ID. NO.					10"	1"		CRUISE NO.	STATION NUMBER							
311260	EV	54525N	05336 W	186	43 07 23	102	1968	11P	10330	0600	05	11	1 2	X1	4 2	0007	
WAVE		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
COLOR CODE	WAVE CODE	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
				14	S02	217	089	078	8	14							
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - ml/l$	TOTAL-P $\mu g - ml/l$	NO ₃ -N $\mu g - ml/l$	NO ₃ -N $\mu g - ml/l$	SiO ₂ -Si $\mu g - ml/l$	pH	STATION NUMBER
		STD	0000	0408	3176	2523	0027495	0000	14628								
	102	OBS	0000	0408	31760	2523			14628								
		STD	0010	0294	3204	2555	0024431	0026	14585								
	102	OBS	0010	0294	32036	2555			14585								
		STD	0020	-0037	3293	2648	0015638	0046	14450								
	102	OBS	0025	-0124	33203	2673			14414								
		STD	0030	-0123	3330	2680	0012501	0060	14417								
	102	OBS	0037	-0122	33415	2690			14420								
	102	OBS	0044	-0079	33515	2696			14443								
		STD	0050	-0087	3355	2700	0010692	0083	14441								
	102	OBS	0074	-0095	33678	2710			14443								
		STD	0075	-0094	3368	2710	0009661	0109	14444								
	102	OBS	0098	-0065	33761	2716			14462								
		STD	0100	-0062	3377	2716	0009086	0132	14464								
		STD	0125	-0008	3393	2727	0008103	0154	14495								
		STD	0150	0077	3412	2737	0007131	0173	14541								
	102	OBS	0157	0106	34176	2740			14555								
	102	OBS	0183	0235	34421	2750			14620								
	102	OBS	0194	0188	34398	2752			14601								
		STD	0200	0213	3444	2753	0005695	0205	14614								
	102	OBS	0210	0250	34515	2756			14632								
		STD	0250	0332	3473	2766	0004602	0230	14677								
	102	OBS	0259	0346	34766	2768			14685								
		STD	0300	0354	3482	2771	0004186	0252	14696								
	102	OBS	T0392	0366	34889	2775			14717								
		STD	0400	0366	3489	2775	0003880	0293	14719								
		STD	0500	0365	3490	2776	0003916	0332	14735								
	102	OBS	T0550	0365	34898	2776			14743								

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WAVE SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS	WAVE CODE	CLOUD CODES	NODE STATION NUMBER		
CITY CODE	ID. NO.					CRUISE NO.	STATION NUMBER										
311260	EV	54558N	053276W	186	43 07 23	115	1968	11P	10331	1134	09	11 2 3	X0	0	0008		
WAVE		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
				17	S06	210	083	072	13								
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - ml/l$	TOTAL-P $\mu g - ml/l$	NO ₃ -N $\mu g - ml/l$	NO ₃ -N $\mu g - ml/l$	SiO ₂ -Si $\mu g - ml/l$	pH	STATION NUMBER
		STD	0000	0448	3230	2562	0023815	0000	14652								
115		OBS	0000	0448	32299	2562			14652								
		STD	0010	0359	3263	2597	0020461	0022	14621								
115		OBS	0010	0359	32634	2597			14621								
		STD	0020	0250	3309	2643	0016089	0040	14582								
115		OBS	0020	0250	33093	2643			14582								
		STD	0030	0059	3364	2700	0010711	0054	14506								
115		OBS	0030	0059	33635	2700			14506								
		STD	0050	0163	3402	2723	0008467	0073	14561								
115		OBS	0050	0163	34016	2723			14561								
115		OBS	0074	0082	34080	2734			14530								
		STD	0075	0084	3409	2735	0007395	0093	14531								
115		OBS	0099	0125	34226	2743			14555								
		STD	0100	0128	3423	2743	0006618	0110	14557								
		STD	0125	0192	3435	2748	0006177	0126	14591								
115		OBS	0149	0244	34461	2753			14619								
		STD	0150	0245	3447	2753	0005706	0141	14620								
		STD	0200	0303	3465	2762	0004891	0168	14656								
		STD	0250	0343	3478	2769	0004334	0191	14683								
115		OBS	0297	0366	34852	2773			14701								
		STD	0300	0366	3485	2773	0004068	0212	14702								
115		OBS	0396	0365	34864	2774			14717								
		STD	0400	0365	3486	2774	0004056	0252	14718								
		STD	0500	0364	3487	2774	0004096	0293	14734								
115		OBS	T0595	0363	34874	2775			14750								
		STD	0600	0363	3487	2774	0004164	0334	14750								
		STD	0700	0360	3487	2775	0004217	0376	14766								
115		OBS	0794	0359	34868	2774			14781								
		STD	0800	0359	3487	2775	0004292	0419	14782								
		STD	0900	0361	3487	2774	0004399	0462	14799								
115		OBS	T0944	0362	34878	2775			14807								

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WAVE DIRECTION	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR./10	CRUISE NO.			DIR	HGT	PER	SEA		TYPE	AMT		
311260	EV		54582N	053203W		186	43	07	23	139	1968	IIP	10332	1426	14	16	2	3		X1	3	2	0009
		WATER		WIND		BARO- METER		AIR TEMP °C		VIS.		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS									
		COLOR CODE	TRANS M	DIR	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB	CODE	CODE												
						17	506	203	083	072	8	15											
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	σ_t M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - ml/l	TOTAL-P µg - ml/l	NO ₃ -N µg - ml/l	NO ₃ -N µg - ml/l	SiO ₄ -Si µg - ml/l	pH	STC						
		STD	0000	0604	3271	2576	0022451	0000	14722														
139		OBS	0000	0604	32705	2576			14722														
		STD	0010	0463	3290	2608	0019437	0021	14668														
139		OBS	0010	0463	32902	2608			14668														
		STD	0020	0167	3354	2685	0012097	0037	14551														
139		OBS	0028	0036	33880	2721			14498														
		STD	0030	0042	3390	2722	0008600	0047	14502														
139		OBS	0047	0098	34052	2731			14532														
		STD	0050	0113	3408	2732	0007648	0063	14540														
139		OBS	0070	0192	34252	2740			14580														
		STD	0075	0202	3429	2742	0006686	0081	14586														
		STD	0100	0253	3447	2753	0005744	0097	14615														
139		OBS	0100	0253	34470	2753			14615														
		STD	0125	0320	3465	2761	0004993	0110	14651														
		STD	0150	0362	3477	2767	0004481	0122	14674														
139		OBS	0150	0362	34774	2767			14674														
		STD	0200	0368	3484	2771	0004112	0144	14686														
139		OBS	0200	0368	34837	2771			14686														
		STD	0250	0365	3485	2772	0004029	0164	14693														
		STD	0300	0363	3487	2774	0003940	0184	14701														
139		OBS	0300	0363	34865	2774			14701														
		STD	0400	0362	3487	2775	0003958	0223	14717														
139		OBS	0400	0362	34873	2775			14717														
		STD	0500	0362	3487	2775	0004032	0263	14733														
		STD	0600	0361	3487	2775	0004113	0304	14750														
139		OBS	0600	0361	34874	2775			14750														
		STD	0700	0361	3488	2775	0004154	0345	14766														
		STD	0800	0361	3488	2775	0004239	0387	14783														
139		OBS	T0802	0361	34882	2775			14783														
		STD	0900	0350	3487	2776	0004272	0430	14795														
		STD	1000	0347	3486	2775	0004362	0473	14810														
139		OBS	1000	0347	34864	2775			14810														
		STD	1100	0356	3488	2776	0004429	0517	14831														
		STD	1200	0365	3490	2776	0004470	0561	14852														
139		OBS	T1204	0365	34901	2776			14852														
		STD	1300	0365	3491	2777	0004479	0606	14868														
139		OBS	T1388	0364	34919	2778			14883														

REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	WAVE SQUARED	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS			WEA- TER CODE	CLOUD CODES		NOOC STATION NUMBER			
CITY CODE	ID. NO.					10°	1°	MO		DAY	HR./10		CRUISE NO.	STATION NUMBER	DIR.		HGT	PER		SEA	TYPE	AMT
311260	EV		55009N	053141W	186	53	07	23	165	1968	11P 10333	2030	13	34	1	2		X1	3	5		0010
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS										
		COLOR CODE	TRANS- MIT	DIR.	SPEED OF FORCE	DRY BULB	WET BULB															
					17	S11	166	094	072	8	13											
MESSAGE TIME HR 1/10	CASE NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ D DTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	SID ₄ -Si μg - ml/l	pH	1 C C					
		STD	0000	0660	3313	2602	0019939	0000	14750													
165		OBS	0000	0660	33131	2602			14750													
		STD	0010	0632	3356	2640	0016393	0018	14746													
165		OBS	0010	0632	33561	2640			14746													
		STD	0020	0267	3405	2718	0009009	0031	14602													
165		OBS	0020	0267	34047	2718			14602													
		STD	0030	0291	3441	2745	0006468	0039	14619													
165		OBS	0030	0291	34411	2745			14619													
		STD	0050	0242	3444	2751	0005868	0051	14602													
165		OBS	0050	0242	34438	2751			14602													
		STD	0075	0306	3461	2759	0005130	0065	14636													
165		OBS	0099	0351	34732	2764			14661													
		STD	0100	0351	3473	2765	0004641	0077	14661													
		STD	0125	0356	3476	2766	0004479	0088	14668													
		STD	0150	0361	3480	2768	0004316	0099	14674													
165		OBS	0198	0371	34854	2772			14687													
		STD	0200	0371	3485	2772	0004013	0120	14687													
		STD	0250	0368	3486	2773	0003976	0140	14694													
		STD	0300	0365	3487	2774	0003939	0160	14702													
165		OBS	T0302	0365	34868	2774			14702													
165		OBS	T0398	0364	34876	2775			14717													
		STD	0400	0364	3488	2775	0003956	0199	14718													
		STD	0500	0362	3488	2775	0004007	0239	14733													
165		OBS	0595	0360	34880	2775			14748													
		STD	0600	0360	3488	2775	0004057	0279	14749													
		STD	0700	0360	3488	2775	0004128	0320	14766													
		STD	0800	0359	3488	2776	0004187	0362	14782													
165		OBS	0800	0359	34884	2776			14782													
		STD	0900	0357	3489	2776	0004198	0404	14798													
		STD	1000	0354	3489	2777	0004253	0446	14813													
165		OBS	1043	0353	34896	2777			14820													
		STD	1100	0354	3490	2777	0004271	0489	14830													
		STD	1200	0357	3490	2778	0004350	0532	14848													
		STD	1300	0359	3491	2778	0004429	0576	14866													
165		OBS	T1312	0359	34908	2778			14868													

REFERENCE		SHIP CODE	LATITUDE ° ' 10	LONGITUDE ° ' 10	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
311260	EV		55107N	052532W		186	52	07	23	187	1968	11P	10334	2752	16	34	1	2		X1	3	6	0011
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLDER CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB										
									17	S10	159	122	100	8	14								
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ D DYN. M. X 10 ³		SOUND VELOCITY	D ₂ m/l	PO ₄ -P μg - σt/l	TOTAL-P μg - σt/l	NO ₃ -N μg - σt/l	NO ₂ -N μg - σt/l	SIO ₄ -Si μg - σt/l	pH	SC				
		STD	0000	0672	3381	2654	0015041		0000		14764												
187		OBS	0000	0672	33807	2654					14764												
		STD	0010	0606	3410	2686	0012048		0014		14743												
		STD	0020	0544	3434	2712	0009535		0024		14723												
187		OBS	0025	0514	34437	2723					14713												
		STD	0030	0477	3450	2733	0007602		0033		14699												
		STD	0050	0380	3469	2758	0005229		0046		14664												
187		OBS	0050	0380	34686	2758					14664												
		STD	0075	0371	3476	2765	0004592		0058		14666												
187		OBS	0075	0371	34762	2765					14666												
		STD	0100	0370	3483	2770	0004087		0069		14670												
187		OBS	0100	0370	34831	2770					14670												
		STD	0125	0367	3484	2771	0004012		0079		14673												
187		OBS	0149	0365	34853	2773					14676												
		STD	0150	0365	3485	2773	0003917		0089		14677												
187		OBS	0199	0367	34863	2773					14686												
		STD	0200	0367	3486	2773	0003907		0108		14686												
		STD	0250	0367	3487	2774	0003914		0128		14694												
187		OBS	0299	0367	34873	2774					14702												
		STD	0300	0367	3487	2774	0003921		0148		14702												
187		OBS	0398	0369	34881	2775					14720												
		STD	0400	0369	3488	2775	0003971		0187		14720												
		STD	0500	0364	3488	2775	0003999		0227		14734												
		STD	0600	0361	3488	2775	0004053		0267		14750												
187		OBS	T0600	0361	34882	2775					14750												
		STD	0700	0360	3488	2775	0004128		0308		14766												
187		OBS	T0796	0359	34881	2776					14781												
		STD	0800	0359	3488	2775	0004210		0350		14782												
		STD	0900	0362	3489	2776	0004253		0392		14800												
		STD	1000	0365	3490	2777	0004298		0435		14818												
187		OBS	T1003	0365	34901	2776					14819												
		STD	1100	0365	3491	2777	0004317		0478		14835												
187		OBS	1196	0364	34922	2778					14851												
		STD	1200	0364	3492	2778	0004301		0521		14852												
		STD	1300	0361	3492	2779	0004332		0564		14867												
		STD	1400	0356	3493	2779	0004337		0608		14882												
		STD	1500	0350	3493	2780	0004326		0651		14896												
187		OBS	T1595	0342	34930	2781					14909												

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WATERSIDE SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	WD	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA	
311260	EV	55184N	052374W	186	52	07	23	208	1968	11P	10335	3091	16	12	1	2		X1	4	7	0012
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS												
COLOR CODE	TRANS. (m)	DIR	SPEED OR FORCE		DRY BULB	WET BULB															
				16	511	159	106	089	8	14											
MISSINGP TIME 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₂ -N μg - ml/l	SiO ₂ -Si μg - ml/l	pH	3 CCT				
		STD	0000	0654	3346	2629	0017376	0000	14752												
208	OBS	0000	0654	33464	2629				14752												
	STD	0010	0581	3394	2676		0012947	0015	14731												
	STD	0020	0520	3428	2710		0009713	0026	14712												
208	OBS	0025	0494	34395	2722				14704												
	STD	0030	0474	3441	2726		0008275	0035	14696												
	STD	0050	0408	3445	2736		0007265	0051	14673												
208	OBS	0050	0408	34452	2736				14673												
	STD	0075	0358	3470	2761		0004941	0066	14659												
208	OBS	0075	0358	34699	2761				14659												
	STD	0100	0369	3477	2766		0004528	0078	14669												
208	OBS	0100	0369	34771	2766				14669												
	STD	0125	0365	3481	2769		0004218	0089	14672												
	STD	0150	0364	3483	2771		0004050	0099	14676												
208	OBS	0150	0364	34834	2771				14676												
	STD	0200	0368	3486	2773		0003909	0119	14686												
208	OBS	0200	0368	34864	2773				14686												
	STD	0250	0368	3487	2774		0003904	0139	14694												
	STD	0300	0367	3487	2774		0003943	0158	14702												
208	OBS	0302	0367	34871	2774				14703												
208	OBS	0399	0365	34874	2774				14718												
	STD	0400	0365	3487	2774		0003981	0198	14718												
	STD	0500	0364	3488	2775		0004036	0238	14734												
	STD	0600	0363	3488	2775		0004097	0279	14750												
208	OBS	T0600	0363	34879	2775				14750												
	STD	0700	0364	3488	2775		0004182	0320	14767												
208	OBS	T0796	0364	34885	2775				14784												
	STD	0800	0364	3488	2775		0004271	0362	14784												
	STD	0900	0360	3488	2775		0004306	0405	14799												
	STD	1000	0355	3488	2776		0004338	0449	14814												
208	OBS	T1002	0355	34878	2776				14814												
	STD	1100	0361	3490	2777		0004343	0492	14833												
208	OBS	1197	0365	34910	2777				14851												
	STD	1200	0365	3491	2777		0004400	0536	14852												
	STD	1300	0362	3492	2778		0004408	0580	14868												
	STD	1400	0360	3492	2779		0004415	0624	14883												
	STD	1500	0357	3493	2779		0004421	0668	14899												
208	OBS	T1597	0355	34934	2780				14915												

REFERENCE CITY CODE	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	OBS. NO.	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
						10"	5"	MO DAY HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AUT	
311260	EV	54111N	05206 W		186	42	07	24 036	1968	11P	10336	2615	16	15	2	3		X2	5	8	0013
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
		COLOR CODE	TEMP. (°C)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB												
					15	S20	444	072	072	6	14										
MESSAGE TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta$ OYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₂ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH				
		STD	0000	0672	3380	2653	0015108		0000	14764											
036		OBS	0000	0672	33798	2653				14764											
		STD	0010	0639	3390	2666	0013946		0015	14754											
		STD	0020	0593	3404	2683	0012354		0028	14739											
036		OBS	0025	0566	34113	2692				14729											
		STD	0030	0516	3424	2708	0009979		0039	14712											
		STD	0050	0381	3461	2752	0005810		0055	14664											
036		OBS	0051	0377	34621	2753				14662											
		STD	0075	0363	3479	2768	0004301		0067	14662											
036		OBS	0076	0362	34792	2768				14662											
		STD	0100	0365	3483	2771	0004067		0078	14668											
036		OBS	0101	0365	34828	2771				14668											
		STD	0125	0365	3485	2772	0003942		0088	14672											
		STD	0150	0364	3487	2774	0003817		0097	14676											
036		OBS	0152	0364	34867	2774				14677											
		STD	0200	0365	3487	2774	0003833		0117	14685											
036		OBS	0203	0365	34873	2774				14686											
		STD	0250	0365	3487	2774	0003849		0136	14693											
		STD	0300	0365	3488	2775	0003878		0155	14702											
036		OBS	T0305	0365	3477P	2766P															
		STD	0400	0364	3488	2775	0003935		0194	14718											
036		OBS	0404	0364	34879	2775				14718											
		STD	0500	0363	3488	2775	0004004		0234	14734											
		STD	0600	0362	3488	2775	0004080		0274	14750											
036		OBS	T0605	0362	34884	2775				14751											
		STD	0700	0360	3488	2776	0004109		0315	14766											
		STD	0800	0357	3488	2776	0004173		0357	14781											
036		OBS	T0802	0357	34883	2776				14782											
		STD	0900	0359	3489	2776	0004224		0399	14799											
		STD	1000	0361	3489	2776	0004330		0441	14816											
036		OBS	T1014	0361	34896	2777				14819											
		STD	1100	0363	3491	2777	0004291		0484	14834											
		STD	1200	0365	3492	2778	0004325		0528	14852											
036		OBS	T1210	0365	34925	2778				14854											
		STD	1300	0363	3493	2779	0004335		0571	14868											
		STD	1400	0358	3493	2780	0004333		0614	14883											
		STD	1500	0350	3493	2780	0004297		0657	14896											
036		OBS	T1619	0337	34935	2782				14911											

REFERENCE	SHIP NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARSSEN SQUARE	STATION TIME (GMT)	YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
								CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	

311260 EV 54051N 05226 W 186 42 07 24 058 1968 11P 10337 1959 18 15 1 2 X2 5 8 0014

WATTS		WIND		BARO- METER (mb)	AIR TEMP. °C		VLS CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS
COLOR CODE	TRANS (m)	DIR	SPEED OF FORCE		DRY BULB	WET BULB			

15 S16 064 078 072 5 14

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. Σ 10 ³	SOUND VELOCITY	O ₂ m/l	PO ₂ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	PH	SC
		STD	0000	0550	3341	2638	0016585	0000	14709								
		OBS	0000	0550	33405	2638			14709								
058		STD	0010	0398	3370	2678	0012788	0015	14652								
		STD	0020	0291	3394	2707	0010018	0026	14611								
058		OBS	0022	0275	33982	2712			14605								
		STD	0030	0247	3411	2724	0008377	0035	14596								
058		OBS	0044	0216	34268	2739			14587								
		STD	0050	0216	3429	2741	0006782	0050	14588								
058		OBS	0065	0216	34372	2748			14592								
		STD	0075	0249	3447	2753	0005697	0066	14609								
058		OBS	0086	0280	34563	2758			14626								
		STD	0100	0310	3465	2762	0004883	0079	14642								
		STD	0125	0348	3477	2768	0004354	0091	14664								
058		OBS	0130	0353	34785	2768			14667								
		STD	0150	0358	3481	2770	0004171	0101	14673								
058		OBS	0174	0362	34840	2772			14679								
		STD	0200	0362	3485	2773	0003957	0122	14684								
		STD	0250	0363	3486	2773	0003932	0142	14692								
058		OBS	0261	0363	34867	2774			14694								
		STD	0300	0364	3487	2774	0003908	0161	14701								
058		OBS	0347	0364	34873	2774			14709								
		STD	0400	0364	3487	2774	0003971	0201	14718								
		STD	0500	0364	3488	2775	0004051	0241	14734								
		STD	0600	0362	3488	2775	0004101	0281	14750								
058		OBS	T0665	0360	34878	2775			14760								
		STD	0700	0357	3488	2775	0004132	0323	14765								
		STD	0800	0352	3487	2776	0004190	0364	14779								
058		OBS	T0877	0350	34870	2776			14791								
		STD	0900	0351	3487	2776	0004270	0406	14795								
		STD	1000	0353	3488	2776	0004325	0449	14813								
		STD	1100	0355	3488	2776	0004390	0493	14831								
058		OBS	1102	0355	34884	2776			14831								
		STD	1200	0358	3487	2775	0004612	0538	14848								
		STD	1300	0361	3487	2774	0004732	0585	14866								
058		OBS	T1324	0362	34867	2774			14871								
		STD	1400	0361	3487	2774	0004811	0632	14883								
		STD	1500	0358	3488	2776	0004780	0680	14899								
		STD	1750	0338	3493	2781	0004350	0795	14933								
058		OBS	T1771	0336	34936	2782			14936								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARSDEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	IO. NO.						10°	1°	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT	PER		SEA	TIME	
311260	EV		54032N	05236 W		186	42	07	24	100	1968	11P	10338	1335	13	15	1	2		X2	5	8	0015
						WATER		WIND		BARO- METER (mb)		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (unit)	DIR.	SPEED OR FORCE			DRY BULB	WET BULB										
									17	S10	058	064	064	6	14								

MESSAGE TIME HR. 1/10	CST NO.	CARD TYPE	DEPTH m	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DTN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₂ -Si μg - ml/l	pH	S C
		STD	0000	0516	3203	2533	0026533	0000	14677								
100		OBS	0000	0516	32030	2533			14677								
		STD	0010	0575	3372	2659	0014538	0021	14725								
100		OBS	0010	0575	33718	2659			14725								
		STD	0020	0506	3394	2685	0012084	0034	14702								
100		OBS	0020	0506	33943	2685			14702								
		STD	0030	0362	3420	2721	0008720	0044	14647								
100		OBS	0030	0362	34197	2721			14647								
		STD	0050	0276	3431	2738	0007115	0060	14615								
100		OBS	0061	0274	34407	2746			14617								
100		OBS	0071	0301	34513	2752			14632								
		STD	0075	0306	3458	2757	0005356	0076	14635								
100		OBS	0091	0323	34759	2769			14648								
		STD	0100	0331	3476	2768	0004263	0088	14653								
		STD	0125	0347	3475	2767	0004464	0099	14663								
100		OBS	0127	0348	34754	2766			14664								
		STD	0150	0353	3477	2767	0004423	0110	14670								
100		OBS	0162	0355	34785	2768			14673								
		STD	0200	0360	3485	2773	0003930	0131	14682								
100		OBS	0203	0360	34851	2773			14683								
		STD	0250	0360	3486	2774	0003905	0150	14691								
		STD	0300	0361	3486	2774	0003952	0170	14699								
		STD	0400	0361	3487	2774	0003970	0209	14716								
100		OBS	0406	0361	34871	2775			14717								
		STD	0500	0360	3488	2775	0003971	0249	14733								
		STD	0600	0359	3488	2775	0004044	0289	14749								
		STD	0700	0358	3488	2776	0004117	0330	14765								
100		OBS	0761	0357	34882	2776			14775								
		STD	0800	0355	3488	2776	0004171	0371	14780								
		STD	0900	0350	3487	2776	0004270	0414	14795								
		STD	1000	0345	3487	2776	0004293	0456	14809								
100		OBS	1015	0344	34869	2776			14811								
		STD	1100	0347	3488	2777	0004324	0500	14827								
		STD	1200	0355	3490	2777	0004353	0543	14847								
100		OBS	1270	0364	34918	2778			14863								

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WATERS SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CRUISE NO.	ID. NO.					MO	DAY		HR	MIN			SEC	CRUISE NO.	STATION NUMBER		DR	HGT PER	
311260	EV		5400 N	052439W	186 42	07 24	116 1968	IIP	10339		0933	08	16	2 3		X4	4 8		0016
WATER		WIND		BARO- METER (mm)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS- MIS.	DIR	SPEED OR FORCE		DRY BULB	WET BULB													
				19	S10	058	061	061	3	13									
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S C		
		STD	0000	0426	3171	2517	0028078	0000	14635										
116		OBS	0000	0426	31705	2517			14635										
		STD	0010	0390	3367	2676	0012960	0021	14648										
116		OBS	0010	0390	33667	2676			14648										
		STD	0020	0157	3386	2711	0009601	0032	14551										
116		OBS	0025	0109	33956	2722			14532										
		STD	0030	0151	3407	2729	0007970	0041	14553										
116		OBS	0038	0199	34197	2735			14577										
		STD	0050	0223	3429	2741	0006829	0055	14591										
116		OBS	0050	0223	34291	2741			14591										
		STD	0075	0256	3442	2748	0006147	0072	14612										
116		OBS	0075	0256	34418	2748			14612										
		STD	0100	0312	3458	2756	0005443	0086	14642										
116		OBS	0100	0312	34578	2756			14642										
		STD	0125	0327	3469	2763	0004757	0099	14654										
		STD	0150	0339	3476	2768	0004333	0110	14664										
116		OBS	0150	0339	34764	2768			14664										
116		OBS	0199	0355	34834	2772			14680										
		STD	0200	0355	3483	2772	0004006	0131	14680										
		STD	0250	0359	3485	2773	0003962	0151	14691										
116		OBS	0299	0363	34867	2774			14700										
		STD	0300	0363	3487	2774	0003903	0171	14701										
116		OBS	T0398	0363	34873	2774			14717										
		STD	0400	0363	3487	2774	0003968	0210	14717										
		STD	0500	0362	3488	2775	0004030	0250	14733										
116		OBS	T0595	0361	34877	2775			14749										
		STD	0600	0361	3488	2775	0004068	0290	14750										
		STD	0700	0360	3488	2775	0004143	0332	14766										
		STD	0800	0359	3488	2775	0004216	0373	14782										
116		OBS	T0842	0359	34880	2775			14789										

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WATERS SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CRUISE NO.	ID. NO.					MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DR	HGT PER		SEA	TIME AMT			
311260	EV		53558N	052589W	186	32	07	24	135	1968	IIP	10340	0357	03	16	2	2	X1	7	2	0017
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS												
COLOR CODE	TRANS (m)	DIR	SPEED OR FORCE		DRY BULB	WET BULB															
				17	S12	058	067	061	7	13											
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	pH	REMARKS				
		STD	0000	0400	3063	2434	0035951	0000	14610												
135		OBS	0000	0400	30630	2434			14610												
		STD	0010	0377	3201	2546	0025331	0031	14620												
135		OBS	0014	0315	32378	2581			14599												
		STD	0020	0138	3263	2614	0018820	0053	14526												
135		OBS	0023	0065	32803	2632			14496												
135		OBS	0028	-0035	33156	2666			14456												
135		OBS	0029	-0050	33280	2676			14451												
		STD	0030	-0050	3330	2678	0012752	0069	14451												
135		OBS	0044	-0052	33480	2693			14455												
		STD	0050	-0078	3353	2698	0010878	0092	14445												
135		OBS	0053	-0083	33553	2700			14443												
135		OBS	0057	-0081	33592	2703			14445												
		STD	0075	-0083	3369	2711	0009625	0118	14449												
135		OBS	0076	-0083	33701	2712			14449												
135		OBS	0084	-0063	33772	2717			14461												
		STD	0100	0055	3400	2729	0007910	0140	14521												
		STD	0125	0195	3429	2743	0006653	0158	14591												
135		OBS	T0132	0225	34357	2746			14607												
		STD	0150	0251	3444	2750	0005982	0174	14622												
135		OBS	T0194	0303	34616	2760			14654												
		STD	0200	0309	3463	2760	0005097	0201	14658												
		STD	0250	0345	3475	2766	0004579	0226	14683												
135		OBS	T0285	0357	34776	2767			14694												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	IO. NO.					10"	1'	MO DAY HR.1/10	CRUISE NO.	STATION NUMBER		DIR	HGT			PER	SEA	TYPE		AMT		
311260	EV		53501N	053103W		186	33	07	24 151	1968	11P	10341	0250	02	16	2	2		X1	7 5		0018
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
		COLOR CODE	TRANSL. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB	DRY BULB	WET BULB	DRY BULB	WET BULB									
						17	514	058	067	061	8	08										
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - 01/l	TOTAL-P μg - 01/l	NO ₃ -N μg - 01/l	NO ₃ -N μg - 01/l	SIO ₄ -Si μg - 01/l	pH	S CC					
		STD	0000	0460	3173	2515	0028240	0000	14650													
151		OBS	0000	0460	31727	2515			14650													
		STD	0010	0189	3225	2580	0022036	0025	14542													
		STD	0020	-0006	3265	2624	0017908	0045	14461													
		STD	0030	-0125	3292	2650	0015396	0062	14411													
151		OBS	0030	-0125	32922	2650			14411													
		STD	0050	-0135	3309	2664	0014096	0091	14412													
151		OBS	0050	-0135	33086	2664			14412													
		STD	0075	-0135	3322	2674	0013067	0125	14418													
151		OBS	0075	-0135	33218	2674			14418													
		STD	0100	-0128	3335	2685	0012038	0157	14427													
151		OBS	0100	-0128	33353	2685			14427													
		STD	0125	-0126	3342	2690	0011516	0186	14433													
		STD	0150	-0108	3353	2698	0010744	0214	14447													
151		OBS	0150	-0108	33527	2698			14447													
151		OBS	0190	-0046	33760	2715			14486													
		STD	0200	-0023	3383	2719	0008775	0263	14499													
151		OBS	T0231	0066	34059	2733			14548													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH INDICATOR	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER	
CTRY CODE	IO. NO.						10"	1'	MO DAY HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA
311260	EV		5347 N	053266W		186	33	07	24 174	1968	11P	10342	0218	02	16	2	2		X1	7 5	0019
							WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB												
					17	518	054	094	072	8	09										
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - 01/l	TOTAL-P μg - 01/l	NO ₃ -N μg - 01/l	NO ₃ -N μg - 01/l	SIO ₄ -Si μg - 01/l	pH	S CC				
		STD	0000	0425	3164	2512	0028543	0000	14634												
174		OBS	0000	0425	31642	2512			14634												
		STD	0010	0417	3164	2512	0028486	0029	14632												
174		OBS	0012	0415	31640	2513			14632												
		STD	0020	0077	3240	2599	0020217	0053	14495												
174		OBS	0025	-0074	32747	2634			14432												
		STD	0030	-0091	3281	2640	0016357	0071	14425												
		STD	0050	-0134	3303	2659	0014536	0102	14411												
174		OBS	0050	-0134	33029	2659			14411												
		STD	0075	-0128	3319	2671	0013341	0137	14421												
174		OBS	0075	-0128	33185	2671			14421												
		STD	0100	-0124	3330	2680	0012479	0169	14428												
174		OBS	0100	-0124	33297	2680			14428												
		STD	0125	-0128	3339	2688	0011741	0199	14432												
		STD	0150	-0131	3349	2696	0010965	0228	14436												
174		OBS	0150	-0131	33488	2696			14436												
174		OBS	0180	-0106	33630	2707			14455												
		STD	0200	-0033	3383	2720	0008726	0277	14495												
174		OBS	T0213	0038	34012	2731			14532												

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARS SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO DAY HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA	TYPE	AMT	
311260	EV	53455N	053411W	186	33 07 24 188	1968	11P	10343	0207	02	18	2	2				X1	4	6	0020
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
		COLOR CODE	TRANS. UNIT	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB	DRY BULB	WET BULB	DRY BULB	WET BULB							
						21	512	041	083	078	8	08								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	pH	1 C
		STD	0000	0558	3210	2534	0026462	0000	14695								
	188	OBS	0000	0558	32100	2534			14695								
		STD	0010	0496	3214	2544	0025505	0026	14672								
		STD	0020	0434	3218	2554	0024588	0051	14648								
	188	OBS	0020	0434	32180	2554			14648								
		STD	0030	0000	3285	2639	0016403	0072	14468								
	188	OBS	0034	-0103	33023	2657			14423								
	188	OBS	0049	-0133	33160	2669			14414								
		STD	0050	-0132	3317	2670	0013460	0101	14414								
	188	OBS	0073	-0119	33347	2684			14427								
		STD	0075	-0119	3336	2685	0012028	0133	14427								
		STD	0100	-0116	3349	2696	0011026	0162	14435								
	188	OBS	0103	-0116	33508	2697			14435								
		STD	0125	-0102	3359	2703	0010297	0189	14447								
	188	OBS	0147	-0055	33746	2714			14474								
		STD	0150	-0046	3377	2716	0009138	0213	14479								
	188	OBS	T0186	0108	34187	2741			14561								

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARS SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO DAY HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA	TYPE	AMT	
311260	EV	53442N	053554W	186	33 07 24 202	1968	11P	10344	0190	02	18	2	2				X1	6	7	0021
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
		COLOR CODE	TRANS. UNIT	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB	DRY BULB	WET BULB	DRY BULB	WET BULB							
						23	510	041	083	072	7	08								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	pH	1 C
		STD	0000	0585	3192	2517	0028092	0000	14704								
	202	OBS	0000	0585	31923	2517			14704								
		STD	0010	0516	3204	2534	0026466	0027	14679								
	202	OBS	0015	0392	32253	2563			14631								
		STD	0020	0151	3267	2616	0018597	0050	14532								
	202	OBS	0025	-0035	33001	2653			14453								
		STD	0030	-0057	3308	2660	0014409	0066	14445								
		STD	0050	-0117	3332	2682	0012354	0093	14424								
	202	OBS	0051	-0119	33326	2682			14423								
		STD	0075	-0130	3348	2695	0011075	0122	14424								
	202	OBS	0076	-0130	33489	2696			14424								
		STD	0100	-0121	3359	2704	0010245	0149	14434								
	202	OBS	0101	-0120	33593	2704			14434								
		STD	0125	-0079	3380	2719	0008779	0173	14460								
		STD	0150	-0004	3391	2725	0008271	0194	14501								
	202	OBS	0152	0003	33920	2725			14504								
	202	OBS	T0185	0159P	33921	2716P											

REFERENCE		SHIP CODE	LATITUDE 1-10	LONGITUDE 1-10	NODC STATION NUMBER	PARSSEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CRUISE NO.	ID. NO.					10'	1'	MO	DAY		HR	1-10			CRUISE NO.	STATION NUMBER	DR		HGT	PER		SEA
311260	EV	52500N	054060W	186	24	07	25	036	1968	IIP	10347	0309	03	22	1	3		X1	7	6	0024	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS- (m)	DIR.	SPEED OR FORCE	METER (mb)	DRY BULB	WET BULB										
									26	507	088	083	072	7	10							
MESSAGE TIME HR 1-10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ ρ DYN. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₃ -N μg - dl/l	NO ₂ -N μg - dl/l	SIO ₄ -Si μg - dl/l	pH	S C					
		STD	0000	0594	3196	2519	0027902	0000	14708													
036		OBS	0000	0594	31962	2519			14708													
		STD	0010	0594	3197	2519	0027874	0028	14710													
036		OBS	0010	0594	31967	2519			14710													
		STD	0020	0207	3266	2612	0019051	0051	14557													
036		OBS	0020	0207	32660	2612			14557													
		STD	0030	-0026	3299	2652	0015197	0068	14458													
036		OBS	0030	-0026	32993	2652			14458													
		STD	0050	-0115	3325	2676	0012882	0097	14424													
036		OBS	0050	-0115	33252	2676			14424													
		STD	0075	-0114	3341	2689	0011662	0127	14431													
		STD	0100	-0112	3355	2700	0010612	0155	14437													
036		OBS	0100	-0112	33546	2700			14437													
		STD	0125	-0087	3367	2709	0009741	0181	14455													
		STD	0150	-0066	3376	2715	0009158	0204	14470													
036		OBS	0150	-0066	33756	2715			14470													
036		OBS	0199	-0035	33852	2722			14494													
		STD	0200	-0034	3385	2722	0008539	0248	14494													
		STD	0250	0024	3397	2729	0007936	0290	14531													
036		OBS	0279	0057	34041	2732			14552													
036		OBS	T0291	0087	34125	2737			14568													

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	NODC STATION NUMBER	PARSSEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CRUISE NO.	ID. NO.					10'	1'	MO	DAY		HR	1/10			CRUISE NO.	STATION NUMBER	DR		HGT	PER		SEA
311260	EV	52535N	053507W	186	23	07	25	052	1968	IIP	10348	0455	04	22	2	3		X1	7	6	0025	
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS- (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB										
									26	507	095	083	079	7	10							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ ρ DYN. M x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₃ -N μg - dl/l	NO ₂ -N μg - dl/l	SIO ₄ -Si μg - dl/l	pH	S C					
		STD	0000	0500	3189	2524	0027403	0000	14669													
	052	OBS	0000	0500	31892	2524			14669													
		STD	0010	0495	3188	2524	0027434	0027	14668													
	052	OBS	0010	0495	31882	2524			14668													
		STD	0020	0072	3247	2605	0019688	0051	14494													
	052	OBS	0020	0072	32466	2605			14494													
		STD	0030	0071	3284	2635	0016801	0069	14500													
	052	OBS	0030	0071	32844	2635			14500													
		STD	0050	-0135	3304	2660	0014457	0100	14411													
	052	OBS	0050	-0135	33039	2660			14411													
		STD	0075	-0130	3321	2673	0013143	0135	14420													
		STD	0100	-0124	3335	2684	0012081	0167	14429													
	052	OBS	0100	-0124	33349	2684			14429													
		STD	0125	-0118	3345	2692	0011312	0196	14437													
		STD	0150	-0112	3356	2701	0010516	0223	14446													
	052	OBS	0150	-0112	33555	2701			14446													
		STD	0200	-0050	3378	2717	0009028	0272	14486													
	052	OBS	T0201	-0048	33785	2717			14487													
		STD	0250	0112	3398	2724	0008430	0316	14571													
		STD	0300	0233	3416	2729	0008017	0357	14635													
	052	OBS	T0312	0255	3378P	2697P																
		STD	0400	0343	3443	2741	0007076	0432	14703													
	052	OBS	T0425	0343	34479	2745			14708													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	HOURS 1/10	HOURS SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAR. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER
CRUISE NO.	STATION NUMBER					10"	1"	M/D	DAY HR. 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT PER	SEA			
311260	EV	52565N	053357W	186	23	07	25	071	1968	11P	10349	0528	05	19	1	2		X1	7 7	0026
WAVE		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS (m)	DIR	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB													
			24	S09	095	061	056	6	11											

MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	PH	S CC
		STD	0000	0364	3091	2460	0033514	0000	14598								
		OBS	0000	0364	30911	2460			14598								
		STD	0010	0351	3152	2509	0028812	0031	14603								
		OBS	0010	0351	31519	2509			14603								
		STD	0020	0323	3170	2526	0027235	0059	14594								
		OBS	0020	0323	31697	2526			14594								
		STD	0030	0025	3289	2642	0016191	0081	14480								
		OBS	0030	0025	32893	2642			14480								
		STD	0050	-0111	3315	2668	0013714	0111	14424								
		OBS	0050	-0111	33145	2668			14424								
		STD	0075	-0001	3359	2699	0010739	0141	14485								
		STD	0100	0083	3393	2721	0008637	0166	14532								
		OBS	0100	0083	33926	2721			14532								
		STD	0125	0128	3409	2732	0007685	0186	14559								
		STD	0150	0171	3425	2741	0006822	0204	14584								
		OBS	0150	0171	34245	2741			14584								
		STD	0200	0250	3449	2754	0005625	0235	14630								
		OBS	0200	0250	34490	2754			14630								
		STD	0250	0284	3459	2759	0005203	0262	14655								
		STD	0300	0313	3468	2764	0004803	0287	14677								
		OBS	0300	0313	34684	2764			14677								
		STD	0400	0357	3482	2771	0004302	0333	14714								
		OBS	T0406	0358	34827	2771			14715								
		STD	0500	0361	3486	2774	0004128	0375	14733								
		OBS	T0510	0361	34863	2774			14734								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	HOURS 1/10	HOURS SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAR. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER
CRUISE NO.	STATION NUMBER					16"	1"	M/D	DAY HR. 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT PER	SEA			
311260	EV	53004N	053180W	186	33	07	25	087	1968	11P	10350	0549	05	22	1	2		X1	6 7	0027
WAVE		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS (m)	DIR	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB													
			25	S10	105	067	061	7	11											

MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	PH	S CC
		STD	0000	0418	3136	2490	0030612	0000	14627								
		OBS	0000	0418	31359	2490			14627								
		STD	0010	0529	3175	2510	0028753	0030	14680								
		OBS	0010	0529	31754	2510			14680								
		OBS	0019	0528	31992	2529			14685								
		STD	0020	0511	3207	2537	0026197	0057	14679								
		OBS	0028	0413	32637	2592			14647								
		STD	0030	0417	3274	2600	0020214	0080	14650								
		OBS	0047	0420	33488	2659			14664								
		STD	0050	0401	3352	2663	0014204	0115	14657								
		STD	0075	0257	3378	2697	0010974	0146	14603								
		OBS	0095	0164	3235P	2590P											
		STD	0100	0134	3399	2723	0008478	0171	14556								
		STD	0125	0037	3415	2742	0006667	0189	14519								
		OBS	0142	0019	34234	2750			14514								
		STD	0150	0050	3425	2749	0005981	0205	14530								
		OBS	T0190	0180	34334	2748			14596								
		STD	0200	0198	3438	2750	0006027	0235	14606								
		STD	0250	0276	3459	2760	0005131	0263	14651								
		OBS	0294	0324	34730	2767			14681								
		STD	0300	0328	3475	2768	0004453	0287	14684								
		OBS	T0396	0366	34918	2778			14718								
		STD	0400	0366	3492	2778	0003653	0328	14719								
		STD	0500	0360	3493	2780	0003573	0364	14733								
		OBS	T0507	0360	34935	2780			14735								

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WASDEN SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE DEPTH OF SAMPLE	WAVE OBSERVATIONS		WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"		CRUISE NO.	STATION NUMBER			DR.	NO. PER SEA		TYPE	AMT		
311260	EV	53040N	053006W	186	33	07	25	104	1968	IIP 10351	0497	05	19	1	2		X1	6 6	0028
WAVE		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS. (M)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB													
			24	S10	102	061	056	7	11										
MESSAGE TIME HR. 1/10	CST NO.	CARD TYPE	DEPTH (M)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	S Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -S μg - ml/l	PH	S C		
		STD	0000	0335	3148	2507	0028968	0000	14593										
104		OBS	0000	0335	31480	2507			14593										
		STD	0010	0283	3183	2539	0025919	0027	14577										
104		OBS	0010	0283	31828	2539			14577										
		STD	0020	-0096	3290	2647	0015642	0048	14423										
104		OBS	0020	-0096	32902	2647			14423										
104		OBS	0029	-0142	33091	2664			14405										
		STD	0030	-0142	3310	2665	0013985	0063	14406										
104		OBS	0049	-0133	33326	2683			14416										
		STD	0050	-0133	3333	2683	0012231	0089	14416										
		STD	0075	-0121	3348	2695	0011101	0118	14428										
104		OBS	0098	-0111	33644	2708			14439										
		STD	0100	-0101	3367	2710	0009701	0144	14444										
		STD	0125	0003	3393	2726	0008159	0167	14500										
104		OBS	0147	0073	34116	2737			14538										
		STD	0150	0078	3413	2738	0007061	0186	14541										
104		OBS	T0197	0154	34386	2754			14586										
		STD	0200	0159	3440	2754	0005578	0217	14589										
		STD	0250	0230	3459	2764	0004730	0243	14631										
104		OBS	0295	0281	34732	2771			14663										
		STD	0300	0286	3474	2771	0004128	0265	14666										
104		OBS	0394	0347	34918	2780			14710										
		STD	0400	0349	3493	2780	0003397	0303	14712										
104		OBS	0493	0363	34993	2784			14734										

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WASDEN SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE DEPTH OF SAMPLE	WAVE OBSERVATIONS		WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"		CRUISE NO.	STATION NUMBER			DR.	NO. PER SEA		TYPE	AMT		
311260	EV	53075N	052428W	186	32	07	25	121	1968	IIP 10352	0459	04	19	1	3		X4	X 9	0029
WAVE		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS. (M)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB													
		24		S10	105	072	067	3	12										
MESSAGE TIME HR. 1/10	CST NO.	CARD TYPE	DEPTH (M)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	S Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -S μg - ml/l	PH	CO ₂		
		STD	0000	0327	3133	2496	0030067	0000	14588										
		OBS	0000	0327	31326	2496			14588										
		STD	0010	0317	3135	2498	0029837	0030	14586										
121		OBS	0010	0317	31346	2498			14586										
		STD	0020	0249	3177	2538	0026087	0058	14563										
121		OBS	0020	0249	31772	2538			14563										
		STD	0030	0236	3315	2649	0015554	0079	14578										
121		OBS	0034	0218	33520	2680			14576										
		STD	0050	0004	3358	2698	0010844	0105	14483										
121		OBS	0058	-0050	33669	2708			14461										
121		OBS	0061	-0061	33711	2712			14457										
121		OBS	0071	-0053	33754	2715			14463										
		STD	0075	-0035	3379	2717	0009056	0130	14472										
121		OBS	0079	-0017	33821	2718			14482										
		STD	0100	0043	3397	2727	0008070	0151	14515										
		STD	0125	0106	3413	2736	0007236	0171	14550										
		STD	0150	0160	3427	2744	0006552	0188	14580										
121		OBS	T0158	0176	34310	2746			14589										
		STD	0200	0234	3447	2754	0005641	0218	14623										
		STD	0250	0292	3462	2761	0005051	0245	14659										
121		OBS	T0252	0294	34626	2761			14660										
		STD	0300	0340	3475	2767	0004571	0269	14689										
121		OBS	0326	0357	34796	2769			14701										
		STD	0400	0362	3484	2772	0004229	0313	14716										
121		OBS	T0440	0364	34858	2773			14724										

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	M/RSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CITY CODE	IO. NO.					10"	1"	M.O.	OAT		HR.1/10	CRUISE NO.		STATION NUMBER	DR.	HGT	PER		SEA	TYPE	
311260	EV	53104N	052248W	186	32	07	25	136	1968	11P	10353	0430	04	19	1	3	X1	6	6	0030	
					WAVE		WIND		BARO-		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mmB)	DRY BULB	WET BULB										
								24	508	112	083	072	8	11							
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g \cdot g^{-1}$	TOTAL-P $\mu g \cdot g^{-1}$	NO ₂ -N $\mu g \cdot g^{-1}$	NO ₃ -N $\mu g \cdot g^{-1}$	SIO ₄ -S $\mu g \cdot g^{-1}$	PH	S C		
		STD	0000	0582	3194	2518		0027945		0000	14703										
136		OBS	0000	0582	31938	2518					14703										
136		OBS	0009	0592	32095	2529					14711										
		STD	0010	0528	3221	2546		0025318		0027	14686										
136		OBS	0019	0154	33057	2647					14539										
		STD	0020	0153	3313	2653		0015114		0047	14539										
136		OBS	0028	0142	33583	2690					14542										
		STD	0030	0112	3360	2694		0011286		0060	14529										
136		OBS	0047	-0041	33742	2713					14464										
		STD	0050	-0029	3379	2717		0009089		0080	14471										
136		OBS	0070	0045	34012	2731					14511										
		STD	0075	0061	3404	2732		0007640		0101	14520										
136		OBS	0094	0116	34142	2737					14549										
		STD	0100	0130	3418	2739		0007011		0120	14557										
		STD	0125	0179	3432	2747		0006306		0136	14585										
136		OBS	T0141	0201	34378	2749					14598										
		STD	0150	0205	3438	2749		0006061		0152	14601										
136		OBS	T0190	0222	34417	2751					14616										
		STD	0200	0226	3442	2751		0005951		0182	14619										
		STD	0250	0247	3447	2753		0005778		0211	14637										
136		OBS	T0292	0270	34540	2757					14655										
		STD	0300	0275	3455	2757		0005454		0239	14659										
		STD	0400	0349	3481	2770		0004332		0288	14710										
136		OBS	T0400	0349	34805	2770					14710										

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	M/RSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS	WAVE CODE	CLOUD CODES	NODC STATION NUMBER				
CITY CODE	ID. NO.					CRUISE NO.	STATION NUMBER														
311260	EV	53130N	052069W	186	32	07	25	152	1968	11P	10354	0695	06	19	2	2	X1	7	6	0031	
					WATER		WIND		BARO-METER		AIR TEMP. °C		VIB. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS				
					COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mb)	DRY BULB	WET BULB	7	11								
								22	510	122	078	067	7	11							
MESSAGE TIME OF HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t °	Σ Δ σ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg · g ⁻¹ /l	TOTAL-P μg · g ⁻¹ /l	NO ₂ -N μg · g ⁻¹ /l	NO ₃ -N μg · g ⁻¹ /l	SiO ₄ -Si μg · g ⁻¹ /l	PH					
		STD	0000	0657	3234	2540	0025824	0000	14739												
152		OBS	0000	0657	32339	2540			14739												
		STD	0010	0568	3242	2558	0024183	0025	14705												
152		OBS	0017	0386	32780	2606			14636												
		STD	0020	0259	3306	2640	0016409	0045	14585												
152		OBS	0023	0152	33296	2666			14542												
		STD	0030	0012	3343	2686	0012031	0060	14482												
152		OBS	0047	-0023	33777	2715			14473												
		STD	0050	0046	3385	2718	0009002	0081	14506												
152		OBS	0056	0133	33961	2721			14548												
152		OBS	0070	0068	33988	2727			14521												
		STD	0075	0073	3401	2729	0007938	0102	14525												
152		OBS	0094	0101	34097	2734			14542												
		STD	0100	0124	3414	2736	0007274	0121	14554												
		STD	0125	0206	3431	2744	0006587	0138	14596												
		STD	0150	0264	3446	2751	0005949	0154	14628												
152		OBS	T0150	0264	34459	2751			14628												
152		OBS	0187	0306	34637	2761			14655												
		STD	0200	0312	3466	2762	0004900	0181	14660												
		STD	0250	0332	3473	2766	0004602	0205	14677												
		STD	0300	0347	3479	2769	0004341	0227	14693												
152		OBS	T0374	0362	34849	2773			14712												
		STD	0400	0362	3485	2773	0004109	0269	14716												
		STD	0500	0359	3487	2774	0004076	0310	14732												
152		OBS	T0562	0358	34873	2775			14742												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	WASDEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CITY NO.	IO. NO.					MO	DAY	HR.1/10	CRUISE NO.		STATION NUMBER	DIR			HGT	PER	SIA		TIME	AMT	
311260	EV	53144N	051574W	186	31	07	25	172	1968	11P	10355	1317	12	20	2	3		X1	7	7	0032
					WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
					COLOR CODE	TRANS- MIT	DIR.	SPEED OR FORCE		DRY BULB	WET BULB										
								25	S08	122	083	078	7	13							
WISSENSA TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ ρ DYN. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -S μg - ml/l	PH	1 CCT				
		STD	0000	0571	3139	2476	0031949	0000	14691												
172	OBS	0000	0571	31388	2476				14691												
	STD	0010	0321	3294	2625		0017820	0025	14609												
172	OBS	0018	0180	33568	2686				14557												
	STD	0020	0154	3360	2691		0011554	0040	14546												
172	OBS	0025	0099	33676	2700				14524												
	STD	0030	0062	3371	2705		0010156	0050	14508												
172	OBS	0045	0027	33848	2718				14497												
	STD	0050	0058	3391	2722		0008611	0069	14513												
172	OBS	0060	0103	34034	2729				14536												
172	OBS	0065	0118	34099	2733				14545												
	STD	0075	0137	3418	2738		0007052	0089	14556												
	STD	0100	0184	3437	2750		0005985	0105	14583												
172	OBS	0100	0184	34366	2750				14583												
	STD	0125	0234	3448	2755		0005526	0119	14611												
172	OBS	0149	0271	34590	2761				14633												
	STD	0150	0272	3459	2761		0005001	0133	14633												
172	OBS	T0199	0316	34780	2772				14663												
	STD	0200	0316	3478	2772		0004030	0155	14663												
	STD	0250	0325	3481	2773		0003909	0175	14675												
	STD	0300	0333	3485	2775		0003791	0194	14688												
	STD	0400	0350	3491	2779		0003558	0231	14712												
172	OBS	T0476	0363	34959	2781				14731												
	STD	0500	0363	3496	2781		0003406	0266	14735												
	STD	0600	0362	3497	2782		0003409	0300	14751												
	STD	0700	0362	3497	2782		0003496	0334	14768												
172	OBS	T0760	0361	34974	2783				14777												
	STD	0800	0361	3498	2783		0003493	0369	14784												
	STD	0900	0360	3498	2783		0003567	0405	14800												
172	OBS	0954	0359	34983	2784				14809												
	STD	1000	0359	3499	2784		0003571	0440	14817												
	STD	1100	0358	3499	2784		0003643	0476	14833												
172	OBS	T1199	0358	34996	2785				14850												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	WATERSIDE SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE DEPTH OF S.W.P.L.S.	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER		
CROSS NO.	ID. NO.					10"	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA	TYPE
311260	EV	53155N	051478W	186	31	07	25	188	1968	11P	10356		1737	15	22	2	3		X1	7	7	0033	
		WAVE		WIND		BARO.		AIR TEMP. °C		NO. OBS.		SPECIAL											
		COLOR CODE	TRANS. UNIT	DIR.	SPEED OR FORCE	METER (mmB)	DRY BULB	WET BULB	VIS CODE	NO. OBS. DEPTH	NO.	NO.	NO.	NO.									
						26	S08	122	083	078	8	14											
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (M)	T °C	S °C	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ σ OIN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	PH	S DATE						
		STD	0000	0598	3150	2481	0031441	0000	14704														
188		OBS	0000	0598	31496	2481			14704														
		STD	0010	0526	3191	2522	0027557	0029	14681														
188		OBS	0015	0430	32116	2549			14645														
		STD	0020	0294	3360	2680	0012618	0050	14608														
188		OBS	0020	0294	33599	2680			14608														
		STD	0030	0253	3399	2714	0009370	0061	14597														
188		OBS	0030	0253	33985	2714			14597														
188		OBS	0040	0295	34202	2728			14620														
		STD	0050	0140	3417	2737	0007157	0077	14553														
188		OBS	0050	0140	34168	2737			14553														
		STD	0075	0189	3431	2745	0006474	0094	14581														
188		OBS	0075	0189	34305	2745			14581														
		STD	0100	0257	3447	2752	0005808	0110	14617														
188		OBS	0100	0257	34466	2752			14617														
		STD	0125	0284	3456	2757	0005346	0123	14634														
		STD	0150	0308	3464	2761	0004976	0136	14649														
		STD	0200	0345	3477	2768	0004388	0160	14675														
188		OBS	T0201	0346	34775	2768			14676														
		STD	0250	0350	3481	2771	0004179	0181	14686														
		STD	0300	0354	3483	2772	0004115	0202	14696														
		STD	0400	0363	3487	2774	0003988	0242	14717														
188		OBS	T0402	0363	34871	2774			14718														
		STD	0500	0362	3487	2775	0004045	0283	14733														
188		OBS	T0597	0361	34874	2775			14749														
		STD	0600	0361	3487	2775	0004113	0323	14750														
		STD	0700	0359	3487	2775	0004184	0365	14765														
188		OBS	T0796	0356	34872	2775			14780														
		STD	0800	0356	3487	2775	0004242	0407	14781														
		STD	0900	0351	3487	2775	0004298	0450	14795														
		STD	1000	0348	3487	2775	0004367	0493	14811														
188		OBS	T1051	0347	34863	2775			14819														
		STD	1100	0348	3487	2776	0004404	0537	14827														
		STD	1200	0349	3488	2777	0004400	0581	14844														
		STD	1300	0350	3490	2778	0004398	0625	14862														
		STD	1400	0351	3491	2779	0004387	0669	14879														
		STD	1500	0352	3492	2780	0004383	0713	14897														
188		OBS	T1536	0352	34928	2780			14903														

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	W/BDEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NDOC STATION NUMBER
CTRY CODE	ID. NO.					10'	1'	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DR.	NG	PER		SEA	TYPE	
311260	EV	53190N	05126 W	186	31	07	25	211	1968	11P	10357	2487	16	26	2	2		X1	6	3		0034
WATER		WIND		BARO- METER		AIR TEMP. °C		VIB CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS										
COLOR CODE	TRANS. (M)	DIR.	SPEED OF FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB	DRY BULB	WET BULB	DRY BULB	WET BULB	DRY BULB	WET BULB									
			23	S10	125	089	078	8	14													
MESSENGER TIME HR. 1/10	CASE NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	pH	S C					
		STD	0000	0752	3369	2634	0016932	0000	14794													
211		OBS	0000	0752	33694	2634			14794													
		STD	0010	0729	3394	2657	0014806	0016	14790													
211		OBS	0015	0669	34021	2671			14768													
		STD	0020	0537	3403	2689	0011755	0029	14716													
		STD	0030	0299	3406	2716	0009209	0040	14618													
211		OBS	0030	0299	34057	2716			14618													
211		OBS	0038	0134	34120	2734			14548													
		STD	0050	0211	3432	2744	0006517	0055	14586													
		STD	0075	0330	3464	2759	0005137	0070	14646													
211		OBS	0075	0330	34638	2759			14646													
		STD	0100	0338	3470	2763	0004765	0082	14655													
		STD	0125	0344	3476	2767	0004391	0094	14662													
		STD	0150	0350	3481	2771	0004109	0104	14670													
211		OBS	0150	0350	34808	2771			14670													
		STD	0200	0355	3485	2773	0003887	0124	14681													
		STD	0250	0360	3487	2774	0003832	0144	14691													
		STD	0300	0366	3487	2774	0003929	0163	14702													
211		OBS	T0304	0366	34873	2774			14703													
211		OBS	T0312	0365	34872	2774			14704													
		STD	0400	0358	3487	2775	0003941	0202	14715													
211		OBS	T0402	0358	34869	2775			14715													
		STD	0500	0359	3487	2775	0004030	0242	14732													
211		OBS	T0597	0359	34877	2775			14748													
		STD	0600	0359	3488	2775	0004068	0283	14749													
		STD	0700	0357	3488	2775	0004121	0324	14764													
		STD	0800	0355	3488	2776	0004173	0365	14780													
		STD	0900	0352	3488	2776	0004223	0407	14796													
		STD	1000	0350	3488	2776	0004272	0450	14812													
211		OBS	T1000	0350	34881	2776			14812													
		STD	1100	0358	3490	2777	0004311	0493	14832													
		STD	1200	0367	3492	2778	0004353	0536	14853													
211		OBS	T1206	0367	34920	2778			14854													
		STD	1300	0362	3492	2778	0004408	0580	14868													
		STD	1400	0358	3491	2778	0004459	0624	14882													
		STD	1500	0353	3491	2778	0004513	0669	14897													
211		OBS	1574	0349	34904	2778			14908													
211		OBS	T1576	0351	34934	2781			14910													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	1/2 DEGREE SQUARE	1/2 DEGREE SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS		WEA- THER CODE	CLOUD CODE	NOCC STATION NUMBER				
CTRY CODE	IO. NO.					10"	3"	MO	DAY		HR. 1/10	CRUISE NO.		STATION NUMBER	DR				HGT	PER	SEA	TYPE
311260	EV		52451N	051096W		186	21	07	26	012	1968	11P 10358	2085	15	22	1	2		X1	6 6		0035
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE		NO. OBS. DEPTH		SPECIAL OBSERVATIONS								
CTRY CODE	IO. NO.	TRANSL COLOR	DIR	SPEED OR FORCE	METER (mbars)	DRY BULB	WET BULB	VIS CODE	NO. OBS.	DEPTH	NO. OBS.	DEPTH	NO. OBS.	DEPTH	NO. OBS.	DEPTH	NO. OBS.	DEPTH	NO. OBS.	DEPTH	NO. OBS.	DEPTH
				24	511	139	072	067	8	13												
MESSAGE TIME HR 1/10	CA-1 NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	S Δ σ DYN. M x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL P μg - ml/l	NO ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	PH	3 CTD					
		STO	0000	0777	3396	2651	0015316	0000	14807													
012		OBS	0000	0777	33957	2651			14807													
		STD	0010	0738	3406	2665	0014033	0015	14795													
012		OBS	0015	0719	34105	2671			14789													
		STD	0020	0704	3413	2675	0013074	0028	14784													
012		OBS	0024	0685	34160	2680			14778													
		STD	0030	0606	3427	2699	0010804	0040	14749													
012		OBS	0048	0429	34533	2741			14682													
		STD	0050	0414	3456	2744	0006514	0057	14677													
012		OBS	0058	0371	34630	2754			14661													
012		OBS	0073	0366	34708	2761			14662													
		STD	0075	0365	3471	2761	0004925	0072	14662													
012		OBS	0097	0356	34778	2768			14663													
		STD	0100	0356	3478	2768	0004335	0083	14664													
		STD	0125	0357	3480	2769	0004217	0094	14668													
		STD	0150	0358	3482	2771	0004098	0104	14673													
012		OBS	0193	0360	34853	2773			14682													
		STD	0200	0360	3485	2773	0003904	0124	14683													
		STD	0250	0359	3486	2774	0003901	0144	14691													
		STD	0300	0359	3486	2774	0003907	0163	14699													
012		OBS	T0389	0358	34874	2775			14713													
		STD	0400	0358	3487	2775	0003939	0203	14715													
		STD	0500	0357	3487	2775	0004014	0242	14731													
		STD	0600	0357	3487	2775	0004099	0283	14748													
012		OBS	0683	0356	34869	2775			14761													
		STD	0700	0356	3487	2775	0004180	0324	14764													
012		OBS	T0780	0355	34869	2775			14777													
		STD	0800	0356	3487	2775	0004252	0367	14780													
		STD	0900	0358	3487	2775	0004368	0410	14798													
		STD	1000	0361	3488	2775	0004410	0454	14816													
012		OBS	T1029	0362	34881	2775			14822													
		STD	1100	0362	3489	2776	0004429	0498	14834													
		STD	1200	0361	3489	2776	0004500	0542	14850													
		STD	1300	0358	3490	2777	0004472	0587	14866													
		STD	1400	0354	3492	2779	0004356	0631	14881													
		STD	1500	0348	3493	2780	0004286	0675	14895													
012		OBS	T1529	0346	34932	2781			14899													

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	GRID COORDINATE	STATION TIME (GMT)				ORIGINATOR'S		DEPTH TO BOTTOM	MAR. DEPTH OF SAMPLING	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER										
CHART NO.	TO NO.					10°	1°	10'	10"	CRUISE NO.	STATION NUMBER			DR	NO	PER		SEA	TYPE		AMT									
311260	EV	52417N	05120 W	186	21 07 26	030	1968	11P	10359	1591	15	26	2	2			X1	6	5	0036										
WAVE		WIND		BARO- METER		AIR TEMP. °C		WET BULB		NO. OBS. DEPTH		SPECIAL OBSERVATIONS		SPECIFIC VOLUME ANOMALY- σ_t		SOUND VELOCITY		O ₂ - P		TOTAL - P		NO ₂ - N		NO ₃ - N		SiO ₄ - Si		pH		S C C
COLOR CODE	TRANS- MITS	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB	WET BULB		
				23	S10	135	094	083	8	13																				
MESSAGE TIME HR 1 TO	CAS NO	CARD TYPE	DEPTH (m)	T °C	S °C	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	SOUND VELOCITY	O ₂ - P	TOTAL - P	NO ₂ - N	NO ₃ - N	SiO ₄ - Si	pH	S C C															
		STD	0000	0702	3258	2554	0024569	0000	14760																					
030		OBS	0000	0702	32582	2554			14760																					
		STD	0010	0577	3290	2594	0020710	0023	14715																					
030		OBS	0010	0577	32897	2594			14715																					
030		OBS	0018	0677	33944	2664			14771																					
		STD	0020	0674	3397	2666	0013883	0040	14770																					
030		OBS	0025	0668	34038	2673			14769																					
		STD	0030	0550	3414	2696	0011114	0052	14724																					
030		OBS	0049	0275	34435	2748			14616																					
		STD	0050	0279	3445	2749	0005084	0070	14618																					
		STD	0075	0350	3467	2760	0005083	0084	14655																					
030		OBS	0076	0351	34672	2760			14656																					
030		OBS	0098	0348	34739	2765			14659																					
		STD	0100	0348	3474	2765	0004561	0096	14660																					
		STD	0125	0352	3479	2769	0004238	0107	14666																					
		STD	0150	0355	3483	2772	0003992	0117	14672																					
030		OBS	0195	0361	34878	2775			14683																					
		STD	0200	0361	3488	2775	0003734	0136	14683																					
		STD	0250	0360	3488	2775	0003783	0155	14691																					
		STD	0300	0360	3488	2775	0003835	0174	14699																					
030		OBS	0389	0359	34872	2775			14714																					
		STD	0400	0359	3487	2775	0003934	0213	14716																					
		STD	0500	0358	3488	2775	0003992	0253	14732																					
030		OBS	0583	0358	34878	2775			14746																					
		STD	0600	0358	3488	2775	0004058	0293	14748																					
		STD	0700	0358	3487	2775	0004195	0334	14765																					
030		OBS	T0779	0358	34865	2774			14778																					
		STD	0800	0357	3487	2775	0004295	0377	14781																					
		STD	0900	0355	3488	2776	0004272	0419	14797																					
		STD	1000	0352	3489	2777	0004247	0462	14812																					
030		OBS	T1026	0351	34890	2777			14816																					
		STD	1100	0352	3489	2777	0004317	0505	14829																					
		STD	1200	0353	3489	2777	0004430	0549	14847																					
		STD	1300	0355	3489	2776	0004535	0593	14864																					
		STD	1400	0356	3488	2776	0004648	0639	14881																					
		STD	1500	0358	3488	2776	0004753	0686	14899																					
030		OBS	T1525	0358	34882	2776			14903																					

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH 1/10	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF TEMP.	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO		DAY	HR			1/10	CRUISE NO.	STATION NUMBER		DR	HGT	
311260	EV	52399N	051269W	186	21	07	26	057	1968	11P 10360	1298	12	22	2	3		X1	3	7	0037
WATER		WIND		BARO-		AIR TEMP. °C		VIL CODE	NO. OBS. DEPTHS			SPECIAL OBSERVATIONS								
COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	METER	UNITS	DRY BULB	WET BULB													
			24	508	125	083	072	7	13											
MESSAGE TIME 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ ρ DTN. M. Σ 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - 01/l	TOTAL-P μg - 01/l	NO ₃ -N μg - 01/l	NO ₃ -N μg - 01/l	SiO ₄ -Si μg - 01/l	pH				
		STD	0000	0659	3236	2541	0025729	0000	14740											
057		OBS	0000	0659	32355	2541			14740											
		STD	0010	0592	3280	2585	0021640	0024	14720											
057		OBS	0010	0592	32796	2585			14720											
057		OBS	0019	0632	34021	2676			14754											
		STD	0020	0618	3402	2678	0012805	0041	14748											
057		OBS	0026	0502	33998	2690			14702											
		STD	0030	0356	3398	2704	0010298	0052	14641											
057		OBS	0038	0112	33952	2722			14535											
		STD	0050	0194	3414	2731	0007751	0071	14576											
		STD	0075	0294	3443	2746	0006381	0088	14628											
057		OBS	0096	0303	34534	2753			14637											
		STD	0100	0294	3454	2755	0005568	0103	14634											
057		OBS	0106	0283	34545	2756			14630											
		STD	0125	0302	3462	2760	0005054	0116	14642											
		STD	0150	0324	3470	2765	0004673	0129	14657											
		OBS	0193	0353	34810	2770			14678											
		STD	0200	0353	3481	2771	0004145	0151	14679											
		STD	0250	0355	3483	2772	0004069	0171	14688											
		STD	0300	0356	3485	2773	0003992	0191	14698											
057		OBS	T0387	0359	34880	2775			14713											
		STD	0400	0359	3488	2776	0003867	0231	14716											
		STD	0500	0359	3489	2776	0003916	0269	14732											
057		OBS	0582	0358	34891	2776			14746											
		STD	0600	0358	3489	2776	0003954	0309	14748											
		STD	0700	0356	3489	2777	0003995	0349	14764											
057		OBS	T0782	0355	34896	2777			14778											
		STD	0800	0355	3490	2777	0004023	0389	14781											
		STD	0900	0355	3490	2777	0004106	0429	14797											
057		OBS	0971	0355	34901	2777			14809											
		STD	1000	0356	3490	2777	0004194	0471	14814											
		STD	1100	0359	3490	2777	0004305	0513	14832											
057		OBS	T1166	0362	34902	2777			14845											

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WATERS SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CRUISE NO.	IO. NO.					CRUISE NO.	STATION NUMBER		DIR	HGT			PER	SEA	TYPE		AUT				
311260	EV	52375N	051328W	186	21	07	26	075	1968	11P	10361	0923	08	29	2	2		X1	8	7	0038
					WATERS COLOR CODE	WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						TRANS (mi)	DIR		SPEED OR FORCE	DRY BULB					WET BULB						
						30	508	115	086	081	7	13									
MESSAGE TIME HR 1/10	CAS- T NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	S Δ ρ DYN. M x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	pH	S C				
		STD	0000	0695	3238	2538	0026012	0000	14754												
075		OBS	0000	0695	32377	2538			14754												
		STD	0010	0618	3244	2554	0024588	0025	14726												
075		OBS	0010	0618	32443	2554			14726												
		STD	0020	0169	3301	2642	0016148	0046	14545												
075		OBS	0020	0169	33008	2642			14545												
075		OBS	0029	0045	33377	2680			14496												
		STD	0030	0041	3339	2681	0012480	0060	14494												
		STD	0050	-0043	3362	2703	0010326	0083	14462												
075		OBS	0058	-0077	33697	2711			14449												
075		OBS	0073	-0006	33830	2719			14486												
		STD	0075	0063	3391	2721	0008640	0106	14519												
075		OBS	0081	0172	34063	2726			14571												
075		OBS	0087	0131	34076	2730			14554												
		STD	0100	0151	3417	2737	0007231	0126	14566												
		STD	0125	0192	3434	2747	0006252	0143	14591												
075		OBS	T0144	0223	34451	2754			14609												
		STD	0150	0235	3448	2755	0005547	0158	14616												
075		OBS	0191	0304	34662	2763			14655												
		STD	0200	0308	3467	2764	0004787	0184	14658												
		STD	0250	0327	3474	2767	0004479	0207	14675												
		STD	0300	0342	3479	2770	0004291	0229	14691												
075		OBS	T0378	0358	34848	2773			14711												
		STD	0400	0358	3485	2773	0004087	0271	14715												
		STD	0500	0357	3486	2774	0004093	0312	14731												
075		OBS	T0591	0357	34872	2775			14746												
		STD	0600	0357	3487	2775	0004084	0353	14748												
		STD	0700	0358	3488	2775	0004145	0394	14765												
		STD	0800	0358	3488	2775	0004213	0435	14782												
075		OBS	T0808	0358	34879	2775			14783												

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WATERS SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CRUISE NO.	ID. NO.					CRUISE NO.	STATION NUMBER		DIR	HGT			PER	SEA	TYPE		AUT				
311260	EV	5235 N	051395W	186	21	07	26	088	1968	11P	10362	0439	04	34	2	2		X2	6	8	0039
				WIND COLOR CODE	WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
					TRANS (mi)	DIR		DRY BULB	WET BULB												
						30	502	119	083	072	7	11									
MESSAGE TIME HR 1/10	CAS- T NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	S Δ ρ DYN. M x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S C				
		STD	0000	0655	3250	2553	0024633	0000	14740												
088		OBS	0000	0655	32495	2553			14740												
		STD	0010	0568	3251	2565	0023523	0024	14706												
088		OBS	0010	0568	32508	2565			14706												
		STD	0020	0221	3285	2626	0017689	0045	14566												
088		OBS	0020	0221	32853	2626			14566												
		STD	0030	-0023	3323	2671	0013414	0060	14463												
088		OBS	0030	-0023	33228	2671			14463												
088		OBS	0030	-0104	33488	2695			14429												
		STD	0050	-0101	3352	2697	0010905	0085	14434												
088		OBS	0074	-0097	33549	2700			14440												
		STD	0075	-0096	3355	2700	0010649	0111	14441												
088		OBS	0099	-0054	33696	2710			14466												
		STD	0100	-0050	3371	2711	0009594	0137	14469												
		STD	0125	0047	3392	2723	0008472	0159	14520												
088		OBS	0148	0115	34090	2733			14557												
		STD	0150	0118	3410	2733	0007546	0179	14559												
088		OBS	T0197	0190	34327	2746			14601												
		STD	0200	0196	3434	2747	0006314	0214	14605												
		STD	0250	0283	3457	2758	0005344	0243	14654												
		STD	0300	0340	3473	2765	0004720	0268	14689												
088		OBS	T0300	0340	34730	2765			14689												
088		OBS	T0399	0363	34822	2770			14716												

REFERENCE		SHIP ID. NO.	LATITUDE 1/10	LONGITUDE 1/10	MOON PHASE	W/RSN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER						
CRUISE CODE	ID. NO.					10"	1"	M/D	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TPP	&WT				
311260	EV	52300N	051518W			186	21	07	26	104	1968	11P	10363	0300	03	34	2	2		X1	6	6	0040					
						WAVE		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS												
COLOR CODE		TRANS. (%)		DIR.		SPEED OR FORCE		WIND		BARO-METER UNITS		DRY BULB WET BULB																
						33		504		119		089		078		7		09										

MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - 0.1/l	TOTAL-P μg - 0.1/l	NO ₂ -N μg - 0.1/l	NO ₃ -N μg - 0.1/l	SIO ₄ -S μg - 0.1/l	pH	S C
		STD	0000	0659	3225	2533	0026551	0000	14738								
	104	OBS	0000	0659	32245	2533			14738								
	104	OBS	0008	0572	32346	2551			14706								
		STD	0010	0553	3236	2555	0024476	0026	14699								
	104	OBS	0017	0488	32406	2566			14673								
		STD	0020	0282	3266	2606	0019618	0048	14590								
	104	OBS	0023	0115	32875	2635			14519								
		STD	0030	0014	3303	2653	0015093	0065	14477								
	104	OBS	0040	-0103	33226	2674			14427								
		STD	0050	-0102	3330	2680	0012557	0093	14431								
		STD	0075	-0098	3347	2693	0011255	0122	14439								
		STD	0100	-0094	3363	2706	0010033	0149	14447								
	104	OBS	0105	-0093	33662	2709			14449								
		STD	0125	-0046	3381	2719	0008840	0173	14476								
		STD	0150	0007	3396	2728	0007947	0194	14506								
	104	OBS	0170	0044	34052	2734			14528								
	104	OBS	T0190	0077	34116	2737			14547								
		STD	0200	0097	3416	2739	0006960	0231	14558								
		STD	0250	0232	3449	2756	0005499	0262	14631								
	104	OBS	0280	0340	34772	2769			14686								

REFERENCE	SHIP ID. NO.	LATITUDE ° 1/10	LONGITUDE ° 1/10	ORIGINATOR'S STATION NUMBER	STATION TIME (GMT)	YEAR	CRUISE NO.	DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				CLOUD CODES	NOOC STATION NUMBER	
										DIR.	HGT	PER	SEA			
311260	EV	52262N	052057W	186	22 07 26 120	1968	11P 10364	0282	03	34	1	2		X1	6 6	0041
				WAVE	WIND	BARO-	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
COLOR CODE	TRANS. (%)	DIR.	SPEED OR FORCE	WIND	BARO-METER (mb)	DRY BULB	WET BULB									
			33	504	119	089	083	8	09							

MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - 0.1/l	TOTAL-P μg - 0.1/l	NO ₂ -N μg - 0.1/l	NO ₃ -N μg - 0.1/l	SIO ₄ -S μg - 0.1/l	pH	S C
		STD	0000	0652	3250	2554	0024574	0000	14739								
	120	OBS	0000	0652	32498	2554			14739								
		STD	0010	0486	3273	2592	0020967	0023	14676								
		STD	0020	0274	3295	2629	0017375	0042	14590								
	120	OBS	0020	0274	32948	2629			14590								
		STD	0030	-0060	3315	2666	0013862	0058	14444								
	120	OBS	0035	-0132	33258	2677			14413								
	120	OBS	0037	-0143	33300	2681			14409								
		STD	0050	-0117	3340	2688	0011741	0083	14425								
		STD	0075	-0077	3359	2702	0010412	0111	14450								
	120	OBS	0095	-0056	33715	2712			14465								
		STD	0100	-0055	3374	2714	0009343	0136	14467								
		STD	0125	-0051	3387	2724	0008360	0158	14474								
		STD	0150	-0047	3399	2734	0007441	0177	14482								
	120	OBS	0150	-0047	33992	2734			14482								
		STD	0200	0137	3424	2743	0006666	0213	14577								
	120	OBS	0200	0137	34235	2743			14577								
		STD	0250	0250	3452	2757	0005428	0243	14639								
	120	OBS	T0251	0255	34539	2758			14642								
	120	OBS	0265	0342	34779	2769			14685								

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WGS84 SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CRUISE NO.	ID. NO.					10°	1°	M/D	DAT		HR./10	CRUISE NO.		STATION NUMBER	DR.	HGT	PER		SEA	TYPE	
311260	EV	52217N	052230W	186	22 07 26	135	1968	11P	10365	0275	03	33	2	2		X1	6	6	0042		
WATER		WIND		BARO- METER		AIR TEMP. °C		VIL CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS											
COLOR CODE	TRANS. (M)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB																
			33	S04	122	094	083	8	10												
MISSING TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (M)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - μl/l	TOTAL-P μg - μl/l	NO ₃ -N μg - μl/l	NO ₃ -N μg - μl/l	SiO ₄ -Si μg - μl/l	pH	S C				
		STD	0000	0681	3250	2550	0024954	0000	14750												
135	OBS	0000	0681	32495	2550				14750												
	STD	0010	0558	3272	2583		0021821	0023	14705												
135	OBS	0015	0477	32834	2601				14674												
	STD	0020	0334	3296	2625		0017786	0043	14616												
	STD	0030	0103	3318	2660		0014425	0059	14519												
135	OBS	0035	0016	33272	2673				14482												
	STD	0050	-0070	3340	2687		0011902	0086	14447												
135	OBS	0065	-0111	33511	2697				14432												
	STD	0075	-0093	3358	2702		0010430	0114	14443												
135	OBS	0095	-0056	33697	2710				14465												
	STD	0100	-0048	3372	2712		0009526	0138	14470												
	STD	0125	0005	3386	2720		0008717	0161	14500												
135	OBS	0125	0005	33858	2720				14500												
	STD	0150	0076	3405	2732		0007656	0182	14539												
135	OBS	0150	0076	34050	2732				14539												
135	OBS	0160	0069	34080	2735				14538												
135	OBS	0190	0120	34226	2743				14568												
	STD	0200	0144	3429	2747		0006300	0217	14581												
	STD	0250	0311	3468	2764		0004777	0244	14668												
135	OBS	T0251	0315	34694	2765				14670												

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WGS84 SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS	WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER
CRUISE NO.	ID. NO.					10°	1°	M.O.	DAY		HR.	1/10					
311260	EV	52177N	052401W	186	22 07 26	150	1968	11P	10366	0280	03	34	2 3	X2	7 8		0043
WATER		WIND		BARO- METER		AIR TEMP. °C		VIL CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS							
COLOR CODE	TRANS. (M)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB												
			33	S11	122	106	083	8	08								
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (M)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - μl/l	TOTAL-P μg - μl/l	NO ₃ -N μg - μl/l	NO ₃ -N μg - μl/l	SiO ₄ -Si μg - μl/l	pH	
		STD	0000	0738	3262	2552	0024730	0000	14774								
150	OBS	0000	0738	32623	2552				14774								
	STD	0010	0590	3266	2574		0022636	0024	14717								
	STD	0020	0429	3276	2600		0020173	0045	14654								
150	OBS	0022	0396	32783	2605				14641								
	STD	0030	0209	3301	2640		0016414	0063	14564								
	STD	0050	-0123	3343	2691		0011485	0091	14422								
150	OBS	0050	-0123	33431	2691				14422								
	STD	0075	-0113	3353	2699		0010746	0119	14433								
	STD	0100	-0102	3365	2708		0009850	0145	14443								
150	OBS	0100	-0102	33650	2708				14443								
	STD	0125	-0044	3380	2718		0008926	0168	14477								
	STD	0150	0007	3393	2726		0008183	0190	14506								
150	OBS	0150	0007	33929	2726				14506								
	STD	0200	0087	3415	2739		0006971	0228	14554								
150	OBS	0210	0103	34192	2742				14563								
	STD	0250	0168	3433	2748		0006214	0261	14601								
150	OBS	0250	0168	34327	2748				14601								
150	OBS	0260	0219	34429	2752				14626								

REFERENCE STATION NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MAYSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER			
					10'	1'	MO DAY HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT		
311260	EV	52132N	052538W	186	22	07	26	165	1968	11P	10367	0252	02	32	2	2		X1	7	6	0044	
					WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
					COLOR CODE	TRANS. INCH	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB										
								33	514	108	094	083	7	08								

MESSAGE TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10 ³	Σ Δ D DYN. M. 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P μg - 0.1	TOTAL-P μg - 0.1	NO ₂ -N μg - 0.1	NO ₃ -N μg - 0.1	SIO ₄ -S μg - 0.1	pH	CHL C
		STD	0000	0711	3269	2561	0023908	0000	14764								
165		OBS	0000	0711	32686	2561			14764								
		STD	0010	0674	3270	2566	0023382	0024	14752								
		STD	0020	0637	3270	2572	0022870	0047	14738								
165		OBS	0025	0618	32708	2574			14732								
		STD	0030	0438	3291	2611	0019141	0068	14661								
		STD	0050	-0033	3350	2693	0011287	0098	14465								
165		OBS	0050	-0033	33500	2693			14465								
		STD	0075	-0063	3369	2710	0009687	0124	14458								
165		OBS	0075	-0063	33692	2710			14458								
		STD	0100	-0019	3384	2720	0008726	0147	14485								
165		OBS	0100	-0019	33842	2720			14485								
		STD	0125	0032	3397	2728	0008008	0168	14514								
		STD	0150	0076	3409	2735	0007345	0188	14540								
165		OBS	0150	0076	34091	2735			14540								
165		OBS	T0199	0142	34292	2747			14580								
		STD	0200	0144	3430	2747	0006225	0221	14581								
165		OBS	T0237	0204	34431	2753			14616								

REFERENCE		SHIP CODE	LATITUDE +	LONGITUDE +	WIND INCH	MAYSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
STATION CODE	ID. NO.					1/10	1/10	10'	1'	MO		DAY	HR.1/10			CRUISE NO.	STATION NUMBER	DIR	HGT		PER	SEA	
311260	EV		52084N	053086W	186	23	07	26	184	1968	11P	10368		0232	1	34	2	3		X1	7	7	0045
					WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
					COLOR CODE	TRANS. INCH	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB											
								33	512	108	094	083	8	08									

MESSAGE TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10 ³	Σ Δ D DYN. M. 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P μg - 0.1	TOTAL-P μg - 0.1	NO ₂ -N μg - 0.1	NO ₃ -N μg - 0.1	SIO ₄ -S μg - 0.1	pH	CHL C
		STD	0000	0729	3250	2544	0025507	0000	14769								
184		OBS	0000	0729	32504	2544			14769								
		STD	0010	0659	3250	2552	0024676	0025	14743								
184		OBS	0010	0659	32498	2552			14743								
		STD	0020	0421	3265	2592	0020943	0047	14649								
		STD	0030	0212	3283	2625	0017792	0067	14563								
184		OBS	0030	0212	32831	2625			14563								
		STD	0050	-0121	3331	2681	0012416	0097	14421								
184		OBS	0051	-0129	33328	2682			14418								
184		OBS	0071	-0108	33522	2698			14434								
		STD	0075	-0100	3354	2699	0010717	0126	14439								
		STD	0100	-0049	3367	2707	0009934	0152	14468								
184		OBS	0100	-0049	33667	2707			14468								
		STD	0125	-0005	3382	2718	0008922	0175	14495								
184		OBS	T0149	0049	33984	2728			14526								
		STD	0150	0052	3399	2729	0007959	0196	14527								
		STD	0200	0205	3435	2747	0006313	0232	14609								
184		OBS	T0210	0242	34426	2750			14628								

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	M NO.	WATERSIDE SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAR. DEPTH OF SAMPLES	WAVE OBSERVATIONS		WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER		
CITY CODE	IO. NO.					10'	1"	MO	DAY		HR	CRUISE NO.			STATION NUMBER	DR		HG	SEA		TYPE	AUT
311260	EV		52035N	053200W	186	23	07	26	199	1968	11P	10369	0320	03	34	2	2		X1	3	7	0046
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS- (m)	DIR.	SPEED OR FORCE	MMHG	DRY BULB	WET BULB										
									33	514	108	089	075	7	09							
MESSAGE TIME HR 1/10	CAS T NO.	CARD TYPE	DEPTH M	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t		S Δ D DYN. M x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	pH	S C			
		STD	0000	0738	3235	2531		0026751		0000	14771											
	199	OBS	0000	0738	32352	2531					14771											
		STD	0010	0657	3230	2537		0026135		0026	14740											
	199	OBS	0010	0657	32299	2537					14740											
		STD	0020	0598	3238	2551		0024837		0052	14719											
	199	OBS	0021	0577	32407	2556					14711											
		STD	0030	0173	3289	2633		0017072		0073	14547											
	199	OBS	0034	0052	33044	2652					14495											
		STD	0050	-0068	3335	2683		0012285		0102	14447											
	199	OBS	0050	-0068	33351	2683					14447											
		STD	0075	-0077	3354	2698		0010795		0131	14450											
	199	OBS	0098	-0085	33685	2710					14452											
		STD	0100	-0083	3369	2711		0009614		0157	14453											
		STD	0125	-0050	3379	2717		0008975		0180	14474											
	199	OBS	T0148	-0001	33909	2725					14502											
		STD	0150	0007	3392	2725		0008252		0401	14506											
	199	OBS	T0196	0159	34239	2742					14586											
		STD	0200	0170	3426	2742		0006718		0239	14592											
		STD	0250	0268	3450	2754		0005736		0270	14647											
		STD	0300	0303	3464	2762		0005038		0297	14672											
	199	OBS	T0306	0303	34648	2762					14673											

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	UNIT MOON	WATERSIDE SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAR. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER		
CITY CODE	ID. NO.					10'	1"	MO	DAY		HR.	1/10			CRUISE NO.	STATION NUMBER	DR		HG	SEA		TYPE	AUT
311260	EV		51586N	053329W		186	13	07	26	216	1968	IIP	10370	0380	03	34	2	2		X1	3	6	0047
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
									33	512	115	089	078	7	09								
MESSAGE TIME HR 1/10	CAS T NO.	CARD TYPE	DEPTH M	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t		S Δ D DYN. M x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	pH	S C					
		STD	0000	0747	3264	2552	0024736		0000	14778													
	216	OBS	0000	0747	32638	2552				14778													
		STD	0010	0662	3231	2537	0026151		0025	14742													
	216	OBS	0010	0662	32305	2537				14742													
		STD	0020	0587	3244	2557	0024252		0051	14715													
	216	OBS	0020	0587	32441	2557				14715													
		STD	0030	0166	3284	2629	0017405		0071	14543													
	216	OBS	0040	-0129	33129	2667				14414													
		STD	0050	-0145	3317	2671	0013425		0102	14408													
		STD	0075	-0162	3329	2681	0012442		0135	14406													
	216	OBS	0075	-0162	33290	2681				14406													
		STD	0100	-0099	3351	2697	0010932		0164	14443													
		STD	0125	-0048	3370	2710	0009671		0190	14473													
		STD	0150	-0011	3385	2720	0008731		0213	14497													
	216	OBS	0150	-0011	33845	2720				14497													
	216	OBS	T0178	0015	33962	2728				14515													
		STD	0200	0104	3413	2737	0007234		0453	14561													
		STD	0250	0247	3443	2750	0006079		0286	14637													
	216	OBS	T0258	0262	34471	2752				14645													
		STD	0300	0287	3461	2761	0005110		0314	14664													
	216	OBS	T0333	0306	34648	2762				14679													

532. AA

Woods Hole Oceanographic Institution
ATLAS - UNCLE TOM'S COLLECTION

